Final report

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Institute of
Environmental
Research Inc.

SITE SELECTION PROCESS

PHASE 3B ... LECTION OF CANDIDATE SITES

Socio-Economic

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NOVEMBER, 1984

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November 15, 1984

Dr. B. D. Mitchell
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2 Bloor Street West
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Dear Dr. Mitchell:

Attached is the report, Site Selection Process, Phase 3B: Selection of Candidate Sites, Socio-Economic.

This report documents the approach and factors utilized in carrying out the socio-economic analysis which contributed to the selection of candidate sites.

The 1:50,000 maps which constitute the Socio-Economic map portfolio have been submitted under separate cover.

Sincerely,

Peter Homenuck

Peter Homenuck, MCIP
Senior Partner

PH:vp
Attach.

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EXECUTIVE SUMMARY

PURPOSE OF THE REPORT

Socio-economic analysis involves the consideration of the potential effects of a proposed project on people and their community, their lifestyles, institutions, living environment and perceptions. The need to consider the potential effects on people as a result of siting the proposed waste treatment facilities is recognized by the Ontario Waste Management Corporaton (OWMC) and is an integral part of the site selection process.

At this stage in the site selection process, the socio-economic consultants were not engaged in assessing the probable impact of an OWMC facility on a community. Rather, the research and analysis activity was focussed on identifying sites where the social impacts of siting an OWMC facility might reasonably be expected to be minimized.

This report, therefore, documents the social analysis which contributed to the process of identifying a short list of candidate sites from the candidate areas announced in the OWMC Phase 3 Interim Report.

SCOPE AND METHOD

The short list of sites was identified through 3 stages of activities:

1) The Identification of Site Areas
2) The Identification of Potential Sites
3) Comparison of Potential Sites and Identification of a Short List of Candidate Sites

THE IDENTIFICATION OF SITE AREAS

- Due to the broad regional scale of the screening activity, the socio-economic factors employed focussed on regionally or provincially significant community, recreation and tourist feautres (pages 5-10; Appendix B).

- These features were described as having higher and lower degrees of constraints using broad measures of risk to human health and safety, and impact on the environment (pages 9-16).

- A constraint mapping procedure was used in which socio-economic features posing a high constraint were applied to portions of the candidate areas. A 400 metre study area was delineated around each feature to maximize the distance between these features and the site area boundaries (pages 16-18).

- Meetings were held with government representatives to review and verify secondary source data obtained, and the locations of the features as mapped (pages 16-17).

- Recommendations were made to the site selection team regarding portions of the candidate areas with major constraints from a socio-economic perspective (page 18). The recommendations from all members of the site selection team (of which the socio-economic consultant is a member) contributed to the identification of a large number of site areas.

THE IDENTIFICATION OF POTENTIAL SITES

- The potential sites were identified through a series of screens. The socio-economic analysis contributed to two screens. The first, at a 1:50,000 scale, was applied to the 152 site areas. The second screen, at 1:10,000 was applied to the 90 site areas remaining from the previous screen (pages 22-23).

- The factors used for site screening included the community and recreation features applied during site area identification (pages 5-10). Three additional factors were introduced for site screening (pages 23-24; Appendix B):
  1) local community and recreation features: this factor was applied at both the 1:50,000 and 1:10,000 scales of analysis;
  2) population density: this factor was applied at the 1:50,000 scale of analysis;
  3) proximity to nearest population concentration(s): this factor was used at the 1:10,000 scale of analysis.

1) First Screen: 1:50,000 scale

- The primary source of data for the first screen was interviews with provincial and local government representatives (page 24).

- Features were recommended as high, or low constraints (pages 26-27).

- Overlays of the mapped features were compared to the site areas; each site area was reviewed on an individual basis. Portions of site areas on which features presented high constraints were identified (page 28).

2) Second Screen: 1:10,000 scale

- The second step of the site area screen employed field investigations and site area ranking from a socio-economic perspective (page 28).

- A study area of 400 metres was delineated around each site area in order to identify sensitive facilities that might be impacted by virtue of their proximity to the proposed waste treatment facilities (page 23).

- The field investigations served to identify and verify information on community and recreation features and assist in identifying nearby population concentrations (pages 28-30).

- Information gathered during the field investigations as well as background data collected during site area screening were used at this stage. The data served to identify site areas with high, moderate and low socio-economic constraints. The site area rankings were integrated with those of the other team disciplines to assist in the identification of potential sites (pages 30-46).

IDENTIFICATION OF CANDIDATE SITES

- Buffer zones and study areas were delineated around each potential site.[1] A 400 metre technical buffer zone and 1000 metre study area, measured from the core of the operations area were delineated around partially integrated sites and fully integrated sites. A 500 metre study area, measured from the edge of the landfill area, was delineated around landfill sites and the landfill portion of integrated sites (page 50).

1. For more detailed information on the buffer zones and study areas refer to M.M. Dillon, Facilities Characteristics and Buffer Zones, 1984 and M.M. Dillon, Site Selection Process Phase 3b: Selection of Candidate Sites, Site Selection - Volumes 1-3, 1984.

- The following factors were used at this stage:
  - community and recreation features (both regional and local)
  - estimated population
  - population concentrations
  - community character

  (page 49; Appendix B).

- Field investigations were employed to gather information on each site (pages 50-51). This information was used to compare and rank the siting options from a socio-economic perspective (pages 53-74).

- Potential access routes to each siting option were evaluated and used in the comparison and ranking of the siting options (page 52, pages 66-70; Appendix E.

- Siting options were ranked according to:
  1) community and recreation features potentially displaced;
  2) estimated population potentially affected;
  3) the general community character of the siting option;
  4) access route suitability.

- At this stage, siting options were ranked in order of preference; by themselves, none of the socio-economic considerations were considered to be compelling enough to recommend exclusion of a siting option.

- Alternative access routes were evaluated on the basis of the number and size of population concentrations along the routes, populations abutting access routes in rural areas, and number of community and recreation features abutting the access routes (pages 66, and 64-65).

- A further analysis of the potential sites was undertaken on the basis of population levels within 5 kilometres (pages 62, and 64-65).

STATUS OF DATA

- Three types of source material were used to gather information during Phase 3b:
  1) secondary sources;
  2) interviews with government representatives at the federal, provincial and municipal levels;
  3) field investigations to collect new data and confirm accuracy of previously obtained data.

- The information from the field investigations was based on the observations of field teams. Observations in some instances were affected by natural or man-made structures that may have partially obscured the view of sites.

- The data noted regarding intensity of use and seasonal use were based on secondary sources and observations at one point in time. Consequently, these data may not completely reflect the actual intensity of use of the feature.

- As no on-site field investigations were conducted, on-site historic resources and cemeteries may not have been identified.

- Data on private and commercial community and recreation features were limited as the operators/owners were not interviewed during Phase 3.

- The information gathered through field investigations was based on observations at the time of the investigations and is not complete. More detailed data will be required during Phase 4.

- Despite the above noted limitations, the data were adequate for the site identification activities undertaken in this phase of the study.

PREMISES AND POSTULATES

PREMISES

- Information gathering interviews were restricted to government representatives. As well, no on-site investigations were undertaken during Phase 3b. Despite these limitations, the anaysis was appropriate for the level of study required in Phase 3b.

POSTULATES

- It was assumed that an average of 60 or more trucks would arrive daily at the proposed waste treatment facilities.

- It was assumed that the incinerator would be designed so that the air quality levels beyond the 400 metre buffer zone around a site be within the Ministry of the Environment standards.

- The following technical buffer zones, setbacks and study areas were agreed upon by OWMC and the site selection consultant team and used throughout Phase 3b:
  1) Identification of Site Areas - a 400 metre setback was delineated around community and recreation features
  2) Identification of Potential Sites - a 400 metre study area was used around each potential site area
  3) Identification of Candidate Sites - a 400 metre technical buffer zone was delineated around the operations area of each partially integrated and fully integrated site

- a 1000 metre study area around the operations area of each partially integrated and fully integrated site
- a 500 metre study area around the edge of the landfill sites and the landfill portion of integrated sites
- for air emission considerations, a 5 kilometre study area around the core of the operations area of each site.

- The access routes agreed upon by OWMC and the site selection consultant team for comparison are provided in the access route key accompanying Appendix E.

FINDINGS AND SUMMARY

FINDINGS

The main findings were prepared, displayed and used in the following ways:

Identification of site areas:

1) a set of maps, at the scale of 1:50,000 which identified socio-economic features[1]

Identification of potential sites:

- Suitability Screen - 1:50,000:

1) a set of maps at the scale of 1:50,000, identifying socio-economic features[1]

- Suitability Screen - 1:10,000:

1) site files, containing field notes for each site area which underwent field investigations

2) maps at 1:10,000, for each site area, identifying community and recreation features[2]

3) maps, at the scale of 1:50,000, of population density by 1981 census enumeration areas[1]

4) table containing data gathered from field investigations, agency interviews and secondary sources, used for site area ranking.

1. The 1:50,000 maps are included in the socio-economic section of the OWMC Site Selection Process, Phase 3b: Selection of Candidate Sites. Technical Data Map Portfolio. 1984.
2. A sample site area map is provided in this report, following page 46.

Identification of Candidate Sites

1) site files for each of the 16 potential sites containing field notes from the field investigations

2) maps at the 1:10,000 scale for each of the sites, identifying socio-economic features

3) tables containing data gathered from field investigations, for siting option assessments and comparisons

SUMMARY

- A set of factors was developed and applied at each stage of Phase 3b. The factors, their significance and level of detail varied from one stage to the next. As the candidate areas were reduced to candidate sites, a greater level of detail was employed and the significance of the socio-economic factors increased. The application of these factors, as inputs to the site selection team and M.M. Dillon, contributed to the reduction in candidate areas, the identification of site areas, the identification of potential sites, comparison of candidate sites and the identification of the short list of candidate sites.[2]

- During the next phase of the site selection process, Phase 4a, factors in addition to those applied in Phase 3b will be used and more detailed data pertaining to the eight candidate sites will be obtained. This detailed socio-economic analysis will contribute to the selection of a preferred site or sites.

1. The 1:10,000 maps are provided in this report, following page 74.
2. For a detailed discussion of the site selection process, refer to M.M. Dillon, Site Selection Process, Phase 3b: Selection of Candidate Sites, Site Selection - Volumes 1-3, 1984. Background regarding the selection of the buffer zones and study areas is provided in M.M. Dillon, Facilities Characteristics and Technical Buffer Zones, 1984a.

CHAPTER 1

INTRODUCTION

The purpose of this report is to document the socio-economic analysis used in identifying a short list of candidate sites from the candidate areas announced in the Ontario Waste Management Corporation (OWMC) Phase 3 Interim Report of May, 1983.

The Environmental Assessment Act, defines "environment" to include 'the social, economic and cultural conditions that influence the life of man or a community'.[1] In recognition of the importance of such factors, OWMC has adopted this definition of "environment" even though OWMC is exempt from the Environmental Assessment Act.

Socio-economic analysis is the consideration of the potential effects of a proposed project on the people and their community, their lifestyles, institutions, living environment and perceptions.

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1. Environmental Assessment Act, R.S.O. 1980, Ch.140, Sec.1 (c)iii.

The Ontario Waste Management Corporation (OWMC) recognizes the need to consider the socio-economic effects that could occur as a result of siting the proposed waste treatment facilities in a particular location. For this reason, socio-economic considerations are a part of the site selection process.

The socio-economic analysis has focussed on the community and recreation facilities, population, and general community character, with the level of detail increasing as the site selection process progressed from the candidate areas to the candidate sites. In the subsequent Phase 4a, the socio-economic analysis will focus in much greater detail on community character, lifestyle, community image, cohesion and stability, and the institutions and people within the community.

Detailed economic considerations were not addressed during Phase 3b. The level of analysis precluded the investigation of concerns such as the potential effect on municipal finance, employment and the local economy. Economic considerations will be investigated in detail during Phase 4a.

This report covers the work undertaken to the end of Phase 3 in which a short list of candidate sites has been identified. This report is organized into three chapters which follow the stages of Phase 3b.

1. The Identification of Site Areas
2. The Identification of Potential Sites
3. Comparison of Potential Sites and Identification of Candidate Sites

Each chapter documents the socio-economic factors employed and the method by which the factors were applied. The appendices provide technical background to the factors and factor ranking, data sources, contacts and instruments used throughout the process.

CHAPTER 2

THE IDENTIFICATION OF SITE AREAS

2.1 INTRODUCTION

This chapter deals with the activities of the first stage of Phase 3b in which site areas were identified from within the candidate areas. The socio-economic factors applied during this stage were determined with consideration given to the site selection goals and objectives, and the issues and concerns raised through the public consultation program. The socio-economic factors were ranked in terms of degree of constraint. The factors and factor ranking are described in Section 2.2.1, pages 5-16.

Government representatives and secondary source material served as the main sources of data during this stage. Section 2.2.2, pages 16-17 describes the data obtained for site area identification.

A constraint mapping process was utilized to assist in identifying the site areas. The socio-economic features were mapped, ranked and the maps applied to the candidate areas. The constraint mapping procedure is discussed in Section 2.2.2, pages 16-18.

2.2 THE IDENTIFICATION OF SITE AREAS

At this stage a screening process was applied to the candidate areas for the purpose of identifying and delineating a broad array of site areas. The process included constraint mapping of socio-economic factors which were applied to the candidate areas. At this stage, all the socio-economic factors were mapped at the 1:50,000 scale.

2.2.1 THE FACTORS

The socio-economic factors utilized at this stage of Phase 3b, as well as those at the subsequent stages, were chosen to reflect the goals and objectives established for the site selection process.[1] The goals are, in order of priority:

1) minimize risk to human health;

2) minimize environmental impacts;

3) minimize financial costs to OWMC.

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1. For a detailed discussion of the site selection goals and objectives refer to OWMC, Facilities Development Process: Appendix to the Phase 3 Report, March 1984, and M.M. Dillon, Site Selection Process, Phase 3b: Selection of Candidate Sites, Site Selection - Volume 1 - Identification of Site Areas, 1984.

Briefly, the objectives of the site selection process relating to socio-economic considerations focussed on:

1) minimizing the displacement of people, sensitive groups within the population, community features;

2) minimizing the exposure of people, sensitive groups within the population and community features;

3) minimizing the potential conflicts between community features and services and the operation of the proposed OWMC facilities.

In determining the socio-economic factors, regard was also given to the general issues and specific concerns raised through the public consultation program and site selection workshops. In summary, the issues and concerns raised by the public, and applicable to the socio-economic analysis are:

1) protection of human health;

2) consideration of the impact of the proposed facilities on the community's character and lifestyle;

3) avoidance of sites near sensitive uses such as schools, hospitals, shopping centers and public buildings.

A detailed discussion of these issues and concerns is found in M.M. Dillon, Site Selection Process, Phase 3b: Selection of Candidate Sites, Site Selection Volume 1 - Identification of Site Areas, 1984.

1. Sensitive groups within the populations are people that might be more sensitive or vulnerable to the impacts associated with an OWMC facility, specifically children, elderly and disabled.

At this stage of analysis, the impact on the community's character and lifestyle was not considered. It was deemed more appropriate to deal with this concern during the initial comparative evaluation stage of Phase 3b (discussed in Chapter 4) and during the detailed comparative evaluation of Phase 4a when more relevant data would be available.

Bearing the foregoing in mind, two factors were identified - community features, and recreation and tourist features - to assist in screening out portions of the candidate areas. Because of the broad regional scale of the screening activity, the social inputs focussed on federally, provincially or regionally significant community, recreation and tourist features.

Regional community features

The community features identified were those which:

1) might conflict with landfill and waste treatment facilities because of the presence of large temporary populations, and/or sensitive populations;

2) might experience a loss in use and enjoyment due to potential nuisance created from the normal operation of OWMC's facilities;

3) are major, regionally serving features whose infrastructure and/or special siting requirements were deemed to make relocation difficult.

Community features fulfilling the above criteria were identified from secondary source materials and in discussions with government representatives. Table 2.1 provides a list of the type of community features used to identify site areas. The community features factor is described in greater detail in the factor sheet provided in Appendix B. The factor sheet includes an explanation of the purpose and content of this factor.

TABLE 2.1

REGIONAL COMMUNITY FEATURES

Hospital

Nursing Home

Home for the Aged

Institution for the Disabled

Mental Health Institution*

Regional Shopping Centre

Public Buildings

Correctional Facility*

Schools (Elementary and Secondary)

Special Education Facility

Post Secondary Education Facility

* No such features were identified and therefore did not contribute to the site selection process.

Note: For a complete description of this factor refer to the factor sheet, Community Features, Identification of Site Areas, Appendix B.

Regional recreation and tourist features

The recreation and tourist features identified provide unique and/or significant recreation and tourist opportunities at a national, provincial or regional level. Siting on such lands would potentially result in a loss of significant and/or unique recreation and tourist resources. An important component of the local economy might also be affected as could the educational, historic or cultural aspects of the feature.

Secondary source materials and government representatives served to identify these recreation and tourist features. The list of recreation and tourist features investigated is presented in Table 2.2 and described in greater detail in the factor sheet provided in Appendix B.

Factor ranking

Because of the many features contained within the factor categories (Regional Community Features and Regional Recreation and Tourist Features) it was not possible to treat a factor category as presenting a specific level of constraint. Therefore the socio-economic features were reviewed to determine whether they presented high or low constraints. Wherever there was doubt as to whether a feature should be considered a high constraint, it was treated as low constraint and retained for more detailed analysis in subsequent stages of site selection.

The goals of the site selection process were used to help determine the degree of constraint that should be associated with each feature. The goals are noted on page 5. The features differed in terms of their

TABLE 2.2

REGIONAL RECREATION AND TOURIST FEATURES

National Park*
Provincial Park*
Conservation Area
Regional Park
Municipal Park
Private Park
Game Farm*
Wildlife Centre*
Golf Course
Commercial Recreation Facility
Community Centre
Cultural Centre
Museum
Theme Park
Fairground/Exhibition
Stadium*
Live Theatre*
Campground
Public Sports Facility
Private Sports Facility
Historic Sites*

* No such features were identified and therefore did not contribute to the site selection process.

Note: For a complete description of this factor refer to the factor sheet, Recreation and Tourist Features, Identification of Site Areas, Appendix B.

functions, locational characteristics and the characteristics of the people using the feature. The following considerations influenced the degree of constraint associated with each of these features:

- characteristics of population using the feature
  - characteristics of the population determined to be of significance were the age, health and the residential nature of the user population; the young and the old, those that are ill, and residential populations were considered of higher constraint
- functions served
  - the features serve a wide range of functions in the community; those providing emergency response services were considered of higher constraint
- locational characteristics
  - a number of features, by virtue of their user population and/or function served, have special locational characteristics. These features were considered of higher constraint than those which do not have special locational characteristics.

These considerations were used in conjunction with the site selection goals and objectives and public concerns in ranking the features, and are outlined below.

1) Risk to human health. Each feature was assessed on the basis of the characteristics of the population using the feature and the emergency response function of each feature. In particular, risk was considered in terms of:

- an approximation of the number of people usually served by the feature and therefore potentially exposed to accidental emissions. Some features serve a greater number of individuals than do others. As little information was available at this stage, a judgement was made regarding the size of population served based on the type of feature.

- whether the regular users of the feature are more at risk from accidental emissions (the elderly, the ill, children).
- whether the normal users of the feature are less mobile and therefore more difficult to evacuate in the event of an accidental emission.
- whether the feature serves an emergency response function in the community.

2) Environmental impacts. The impact of the site location on each feature was assessed through consideration of the use which would be lost, and the potential for incompatibility with remaining uses.

The impact of locating an OWMC facility in proximity to a range of community, recreation and tourist features was considered to be a function of:

Incompatibility[1]

- whether the feature has a residential population

Relocation

- whether the feature has special locational characteristics that would make finding an appropriate, alternative location difficult and/or expensive

1. Another indicator of incompatibility is the possible reduction in the use and enjoyment of a feature through nuisance from normal operations. Any change in the use and enjoyment of a feature will partly depend on the preferences and perceptions of the users, and such preferences and perceptions may vary from feature to feature. Such data were not available at this stage. Therefore, this criterion of possible incompatibility of the OWMC facility in terms of impact on the regular use and enjoyment of a feature was not incorporated into the analysis at this stage.

The degree of constraint of features. The community, recreation and tourist features were evaluated in terms of the characteristics discussed above. A feature was determined to present a high constraint where it was certain that it possessed 1 or more of the following characteristics:

- it serves a large number of people;
- the users are elderly, ill or young children;
- the users are considered to be less mobile;
- the feature serves an emergency function;
- a residential population is associated with the feature;
- the feature has special locational characteristics.

At this stage in the site selection process, only those features on which it was felt that a significant impact could occur were considered high constraints. Table 2.3 presents the characteristics which were determined to be applicable to each type of feature, and the likelihood that the characteristic would be associated with all features within each category of feature. The features determined to be high constraints are noted in Table 2.3.

An exception to the evaluation of the constraint associated with various features is the treatment of elementary and secondary schools. While schools were judged to serve sensitive users (children), as noted in Table 2.3, they were ranked as lower constraints. The data available on individual schools at this stage of the study was limited. It was not possible, for example, to identify schools that were scheduled to be closed due to declining enrolment. For this reason, schools were not assigned a high constraint at this time. During the next stage of the site selection process detailed data would be obtained on individual schools. When this data is available the constraint associated with schools will be reassessed.

Lower constraint features. Table 2.3 also identifies the features considered to present lower constraints at this stage. The criteria applied

TABLE 2.3

FEATURE RATING

Feature	Large Number of People Served	Sensitive Users[1]	Less Mobile Users	Emergency Function	Residential Population	Special Locational Characteristics
High Constraint:						
1. Hospital	●	●	●	●	●	●
2. Nursing Home	x	●	●		●	
3. Home for the Aged	x	●	●		●	
4. Institution for the Disabled		●	●		●	
5. Special Education Facility		●	●			
6. Regional Shopping Centre	●					●
7. Public Building (Emergency Function)				●		x
8. Post Secondary School	●				●	x
9. Theme Park	●					●
Lower Constraints						
10. All Other Public Buildings	x			x		
11. School (elementary and secondary)		●	x			
12. Conservation Area	x					x
13. Regional Park						x
14. Municipal Park						x
15. Private Park						x
16. Golf Course						
17. Commercial Recreation Facility	x					x

Table 2.3 (cont'd)

Feature	Large Number of People Served	Sensitive Users[1]	Less Mobile Users	Emergency Function	Residential Population	Special Locational Characteristics
18. Community Centre	x					
19. Cultural Centre	x					
20. Museum	x					x
21. Fairground/Exhibition	x					
22. Campground	x					
23. Public Sports Facility	x					
24. Private Sports Facility	x					

Key: • - constant - characteristic can normally be attributed to all individual features
x - variable - charactaeristic can probably be attributed to some of the individual features but not necessarily all. For example, not all parks may have special locational criteria and only some community centres may serve a large number of people.

Note: 1) Sensitive users are the elderly, the ill and young children.

to determine high constraint features could not be associated with these features or could not be established with certainty. Our analysis of these features revealed that the risks and impacts depended largely upon the nature of each specific feature. Therefore, additional information on the type and intensity of use would be required in order to establish, with confidence, the significance of each. Furthermore, some questions remained concerning the regional significance of some of these features. It was understood that some of these features could be treated as high constraints at subsequent stages of the process when more detailed information became available.

Our recommendations regarding the degree of constraint of each feature were put forth to the site selection team for discussion and assisted in the identification of exclusionary features. The exclusionary features as determined by the site selection team are identified in the M.M. Dillon, Site Selection Process, Phase 3b: Selection of Candidate Sites, Site Selection - Volume 1 - Identification of Site Areas, 1984.

2.2.2 CONSTRAINT MAPPING PROCESS

Secondary sources were consulted for the initial identification of the community, recreation and tourist features located within and adjacent to the candidate areas. The secondary sources included available government reports, plans and records. A complete list of sources reviewed is provided in the Bibliography. The secondary source material was reviewed to identify the name and location of features as well as any available information on the nature and use of each feature. The locations of socio-economic features compiled through the secondary source material were mapped at 1:50,000.

At the next stage in the process, direct contact was made with designated representatives of relevant federal, provincial and municipal agencies to obtain information on each feature identified in the first level of constraint mapping. The agencies which were contacted are listed in Appendix A.

Each agency was contacted by telephone and/or letter. A member of the study team contacted one or more representatives of each agency to obtain relevant records, reports, plans and first-hand knowledge of each feature. The representatives confirmed features already mapped, and identified additional features which had not been identified from the secondary sources. They also provided additional data on some features. After these interviews and another review of secondary sources, an inventory of regionally significant and/or unique community, and recreation and tourist features within and adjacent to the candidate area boundaries was prepared.

Data on particular features such as privately operated golf courses, parks, and sports facilities were either not available through the government contacts and secondary sources, or the detail was limited. Private owner/operators were not contacted at this level of investigation. Because of the limited information, these features were treated as posing lower constraints at this level of analysis. These features will be investigated in-depth during later stages of the study if they are located within or adjacent to a candidate site.

At this stage, characteristics such as size and intensity of use had no bearing on the way these features were assessed. It should be noted that

the location of the features was approximate due to the scale of mapping used (1:50,000). The approximate locations were suitable for this stage of analysis.

As a result of this second level of investigation, features were identified which had not been previously noted. These features were mapped. A 400 metre setback was delineated around each high constraint feature. The socio-economic consultants made contact once again with government representatives to obtain more detailed information on lower constraint features, and to review and verify the data obtained and the location of the features as mapped. Corrections and changes were made as required. Maps I-1 to I-4 provide the location of all the socio-economic features identified within candidate areas at this stage. The maps are provided in the socio-economic section of OWMC, Site Selection Process, Phase 3b: Selection of Candidate Sites. Technical Data Map Portfolio, 1984. Indexes to the maps are contained in Appendix F.

The mapping of the socio-economic factors was integrated with the factors identified by the other members of the site selection team. All high constraint features and the 400 metre setback area around each feature were recommended to the site selection team for exclusion from further consideration.

Central area access route field investigations[1]

A review by the site selection team of the preliminary list of exclusionary factors, as identified by the same team, revealed that siting choices were restricted in the candidate area located in the central area south of Lake Ontario. In order to maintain diversity of choice and meet the site selection objectives, it was concluded that some limited access route investigations should be undertaken at this stage to facilitate trade-offs between transportation accessibility, hydrogeologic conditions and agricultural considerations. These access route field investigations were carried out concurrently with the constraint mapping process to identify site areas.

The socio-economic factors addressed in the field investigations were:

1) Existing residents (distance through built-up/urban areas);
2) Number of communities by population;
3) Number of residences (rural and farm residences);
4) Existing community and recreation features.

Six access routes to the central area were identified for this investigation by M.M. Dillon. The socio-economic data collected during the field investigations are provided in Appendix C. This investigation was shared by the total site selection team and so Appendix C provides information for four of the six access routes. Data for the remaining two access routes were collected by Marshall, Macklin, Monaghan and are discussed in

1. For a complete discussion of the purpose of the access route field investigations, the factors used and the analysis of the factors, refer to M.M. Dillon, Site Selection Process, Phase 3b: Selection of Candidate Sites, Site Selection: Volume 1 - Identification of Site Areas, 1984.

their report, Site Selection Process, Phase 3b: Selection of Candidate Sites, Land Use, 1984. The analysis of the six access routes is provided in M.M. Dillon, Site Selection Process, Phase 3b: Selection of Candidate Sites, Site Selection Volume 1 - Identification of Site Areas, 1984. The results of this analysis were integrated into the constraint mapping process.

This information, in conjunction with that of the other consultants, was used to identify potentially suitable areas for a landfill, a fully integrated, or a partially integrated facility. As a result, 65 landfill/fully integrated (LF) site areas and 87 physical/chemical treatment/incinerator (PI) site areas were identified. This resulted in a total of 152 site areas to undergo further analysis.

CHAPTER 3

THE IDENTIFICATION OF POTENTIAL SITES

3.1 INTRODUCTION

In this second stage of Phase 3b, the 152 site areas were reduced in number and size. To achieve this, a procedure was used in which a suitability screen based on socio-economic factors was applied to the site areas. This screen was used in conjunction with screens applied by the site selection team consultants to ultimately reduce the site areas to a number of potential sites.

The socio-economic factors employed to screen the site areas were identified following a review of the factors used in site area identification, the site selection goals and objectives, and the issues and concerns raised through the public consultation program. The factors and their ranking are discussed on pages 23-28.

The suitability screen was applied at two scales of investigation. The first scale of investigation was undertaken at 1:50,000 and included the mapping and analysis of the socio-economic factors. The data base was provided through interviews with agency representatives and from secondary sources. Data collection is outlined on pages 24 and 26. The analysis of the site areas is discussed on page 28. This step in the identification of sites resulted in the elimination of many possible site areas. Ninety (90) possible site areas remained for further analysis.

The emphasis of the site area screening shifted to the second scale of investigation at 1:10,000. This permitted greater detail in analysis as well as the introduction of brief field investigations to assist in the analysis. The first step in this suitability screen was the cross-checking of the location of features used at 1:50,000 to ensure that with the change in scale the location of features was not affected and so did not affect the suitability of the remaining site areas for further screening. Additional information regarding the features was obtained primarily through field investigations, with information from secondary sources and agency contacts supplementing the data base. The data sources and field investigation procedures are discussed on pages 28-30. The information collected was used to rank the site areas by degree of constraint. The socio-economic analysis applied to the site areas is outlined on pages 30-46.

3.2 THE SITE AREA SCREENING PROCESS

The socio-economic factors were used to reduce the number and size of site areas through two scales of investigation:

1) A screening of the 152 site areas was undertaken at a 1:50,000 scale. Site areas with major community, recreation and tourist features on-site or in the immediate vicinity were identified as having high constraints. As well, a population density of 400 persons per square kilometre or greater on or adjacent to site areas was considered to be a high contraint.

2) A second screen was applied to the remaining 90 site areas at a scale of 1:10,000. Field investigations were used to identify socio-economic features on-site and within a study area.[1] The site areas were ranked on the basis of the socio-economic constraints on-site and within each study area.

3.2.1 THE FACTORS

The factors employed during site area screening were identified following a review of the site selection goals and objectives, the factors applied during site area identification, and the concerns expressed through the public consultation program. This review served to:

1) ensure that the factors applied at this stage were suitable;

2) assist in refining factors so that they would be appropriate for site area screening;

3) identify additional factors which would be appropriate and could be used at this stage.

The socio-economic factors employed for site area screening are discussed below. The OWMC site selection goals and objectives to which each factor relates are identified in M.M. Dillon, Site Selection Process, Phase 3b: Selection of Candidate Sites, Site Selection - Volume 2 - Identification of Potential Sites, 1984.

1. A 400 metre study area was defined around each of the site areas. This was used to maximize the distance between sensitive features and the proposed waste treatment and management facility. Refer to M.M. Dillon, Facilities Characteristics and Technical Buffer Zones, 1984.

The public concerns reflected in these factors are the same as those considered in site area identification and are discussed on page 5.

The factors used for site area screening included the regional community features and recreation and tourist features applied during site area identification (pages 14-15, Table 2.3). A complete description of this factor is provided in Appendix B. These factors were applied at both the 1:50,000 and 1:10,000 scales of analysis. The following additional factors were introduced for site area screening:

1) Local community and recreation features: in the site area identification stage the emphasis had been placed on regionally and provincially significant features. For potential site identification, this was expanded to include local community and recreation features. Local features located on or within 400 metres of the site areas were taken into consideration. The local features which were considered are presented in Table 3.1. A complete description of this factor is provided in Appendix B. This factor was applied at both the 1:50,000 and 1:10,000 scales of analysis.

2) Population density: population density on or immediately adjacent to a site area was used to identify site areas with varying degrees of constraint. This population factor was applied at the 1:50,000 scale of analysis.

3) Proximity to nearest population concentration(s): this was defined as a population concentration of not less than 45 people and included the population within built-up residential areas, of not less than 15 residences (as provided by Marshall, Macklin, Monaghan). This provided a refinement to the population density factor and was used at the 1:10,000 scale of analysis. Appendix B describes this factor in greater detail.

3.2.2 DATA COLLECTION (1:50,000)

Data gathered at this step provided a basis on which site areas possessing major socio-economic constraints were identified. The main data sources were interviews with provincial and local government representatives. Previously collected secondary source material supplemented the data received from the

TABLE 3.1

SITE AREA SCREENING

ADDITIONAL FACTOR:
LOCAL COMMUNITY AND RECREATION FEATURES

Shopping Centre
Public Building
Health Clinic*
Library
Church
Cemetery
Park
Community Centre
Cultural Centre
Public Sports Facility
Private Sports Facility
Historic Site (designated)
Historic Building (designated and possible)

* No such features were identified and therefore did not contribute to the site selection process.

government representatives. The information obtained for each community and recreation feature included the feature's location and where available its characteristics, size and intensity of use. In some instances the data were limited. This applied particularly to commercial and private features for which detailed information was not acquired.

The data collected on population density was obtained from Statistics Canada. Population density was calculated for enumeration areas using the population for enumeration areas from the 1981 Census and the area (in square kilometres) of the enumeration areas. These calculations do not take into account precisely where the population is located within the enumeration area.

3.2.3 FACTOR RANKING (1:50,000)

The factors applied at the 1:50,000 scale of investigation were regional community and recreation and tourist features, local community and recreation features, and population density. Factors were defined in terms of the degree of constraint each presented. The provincially and regionally significant community, recreation and tourist features identified as high constraints during site area identification remained so. These features are listed on page 14.

The remaining community and recreation features were assessed on an individual basis to determine whether the feature warranted a recommendation as a high constraint for the site area in whole or in part. Data available on these features were reviewed on the basis of the characteristics of

a feature, its size and intensity of use. In some instances, the data were limited and precluded the assessment of a feature on this basis. Wherever this occurred, the feature could not be categorized as a high constraint.

Cemeteries[1] located within the site area boundaries were considered as high constraints, whereas those located in the study area were considered as presenting a lower constraint.[2]

Schools located within the site area boundaries and within the study area were now determined to be high constraints based on additional data dealing with enrolment and intensity of use.

The final factor applied at this step was population density based on enumeration areas. No precedents were found regarding the population density which would pose a high constraint to the development of waste treatment and disposal facilities such as those proposed by OWMC. In the absence of such a precedent, the Statistics Canada definition of a population density for an urban residential area was used. This population density, 400 persons per square kilometres or greater, was recommended as a high constraint.[3] A population density of 200-400 persons per square kilometre was considered as a moderate constraint. Population density of less than 200 persons per square kilometre was considered as a low constraint.

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1. Information on cemeteries varied and in some instances was insufficient for mapping at 1:50,000. Further data gathering and field investigations to complete the information was undertaken during the 1:10,000 scale of analysis.
2. The Environmental Protection Act, RSO 1980. Environmental Regulation RRO 1980, Regulation 309 requires that landfill sites should be a reasonable distance from any cemetery.
3. Areas of this population density are defined as urban by Statistics Canada (1981 Census. Geography Tape File).

These factors are presented on Maps I-5 to I-12, and are located in the socio-economic section of OWMC, Site Selection Process, Phase 3b: Selection of Candidate Sites. Technical Data Map Portfolio, 1984. Indexes to the maps are provided in Appendix F.

3.2.4 ANALYSIS (1:50,000)

Through the use of overlays, the mapped features were compared with the 152 site areas and all features located on or near the site areas were identified. Those features identified as high constraints and located on a site area were used to recommend site areas for exclusion in whole or in part.

This anaysis was integrated with that of the other team disciplines to screen out sections of the site areas.

3.2.5 SITE AREA REVIEW (1:10,000)

As a result of the screens applied in the previous step, the site areas were reduced in number and size to 90 site areas. These site areas were transferred to 1:10,000 maps and reviewed using the factors defined on pages 23 to 25. The socio-economic factors were reviewed with the factors employed by the other study team consultants. Once this was completed, the data collection for the factors applied at 1:10,000 was initiated.

3.2.6 DATA COLLECTION (1:10,000)

Data collected at the 1:10,000 scale of analysis served as a basis by which to reduce the 90 site areas to a small number of potential sites to be retained for comparison and evaluation. The smaller number of site areas to be screened, and the smaller scale of investigation, permitted the use of

field investigations as a main source of data. The field investigations were supplemented by previously collected data. The field investigations served to:

1) verify data on the location and the nature of features identified through the interviews with government representatives and secondary data sources; obtain additional information for some features;

2) identify additional features which had not been noted during the previous data gathering exercises, as well as features which had not been possible to locate precisely from secondary source materials.

Field observation forms were drawn up to facilitate the recording of information. Field investigations were completed for both site areas and the 400 metre study areas. A sample field observation form is provided in Appendix D[1].

Field Investigation Data

The data gathered during the field investigations included the following:

1) Community and recreation features on-site and within the 400 metre study area. The features of concern are identified in the Community and Recreation factor sheet for the Identification of Potential Sites, Appendix B.

2) The location of each feature. The location was mapped while in the field. Those which had been previously mapped from secondary sources and identified by local government representatives were compared to the location mapped from the field investigation, and adjustments were made where necessary.

3) A general description of each feature. The description included comments regarding the level of use at the time of the field investigation, and whether or not the feature is used seasonally. Signs in some instances provided information regarding the programs and services offered at a feature and the hours of use. Current use was noted if it

1. Field observation forms are on file at OWMC's offices.

differed from the intended use (e.g., golf courses used for cross-country skiing) or if the feature appeared to be no longer in use. An estimate of the size of a building and the number of storeys was provided wherever possible.

4) Distinguishing features: These included special features or characteristics such as historic significance, ethnic or religious affiliation, properties for sale or buildings under construction or renovation. A building's historic significance was initially limited to recording sites and century farms designated with a sign. But, buildings which appeared to have historic significance but were not designated by a sign were noted by the field survey teams and a historic consultant provided an assessment of these features.

3.2.7 ANALYSIS (1:10,000)

The site areas were ranked on the basis of the socio-economic constraints on-site and within the study areas.

To assist in ranking and screening the site areas, the data collected during the field investigations and previously acquired data were analysed.

From a socio-economic perspective, priority for retention was given to those site areas with no features on-site or within the 400 metre study area. Site areas with features that presented lower constraints within the 400 metre study area were a second priority for retention.

Table 3.2 was developed which incorporated the following considerations:

1) proximity to the nearest population concentration(s);

2) inventory of all features on-site and within the 400 metre study area. This included an assessment to the extent possible, of the features' intensity of use and significance to the community.

The information in this table was used to rank the site areas from a socio-economic perspective. Site area rankings were based on the following:

1) Site areas with high constraints:
- many features on-site or within the 400 metre study area and/or
- a substantial population concentration (population of 500 or greater) less than 1 kilometre from the site area, and/or
- cemeteries located on-site[1]
- schools located on-site and/or in the study area.

2) Site areas with moderate constraints:
- few features on-site or within the 400 metre study area and/or[2]
- a minor population concentration less than 1 kilometre from the site area.

3) Site areas with low constraints:
- not more than one feature on-site or within the 400 metre study area and the feature can be relocated or is of limited significance and/or
- no population concentrations within 1 kilometre of the site area.

The above categories were used as general guidelines. Professional judgement was used in determining the importance assigned to any feature. In cases where it appeared that a feature was not in regular daily use, or did not serve a sensitive population, it was judged to be a lower constraint. In addition, some information on intensity of use of features was available to permit more precise assessment of the feature's significance. The following features were generally considered to have less significance when located within the 400 metre study area, due to their nature and uses:

- public works yards
- cemeteries
- Welland Feeder Canal
- golf courses
- race tracks and go-cart areas
- possible historic buildings
- century farms

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1. Cemeteries were high constraint on-site where they would have to be relocated but not in the off-site study area where they could possibly co-exist with the facility.
2. Confirmation of the usage of the features is required before the significance of each can be determined.

TABLE 3.2

SUITABILITY SCREEN
SITE AREAS WITH HIGH CONSTRAINTS

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
PI1E[3]	-	-Niagara Meadows Holiday Travel Park -Grassybrook Park	Niagara Falls	0.5 km	70,960 (1981)
PI2E	-	-Niagara Falls Art Gallery -Niagara Meadows Holiday Travel Park -Grassybrook Park	Niagara Falls	0.3 km	70,960 (1981)
PI3E	-	-Niagara Falls Art Gallery -Niagara Meadows Holiday Travel Park -Grassybrook Park	Niagara Falls	0.5 km	70,960 (1981)
PI5E	-	-Centennial Park (undeveloped; at edge of study area) -City of Thorold Cemetery (at edge of study area)	Port Robinson	0.3 km	860 (1981)
PI9E	-Willoughby United Church -Willoughby Church Cemetery	-Cherith Brook Retreat and Outreach Centre	Snyder	2.0 km	75
PI10E	-St. John's United Church	-St. John's Lutheran Cemetery -St. Joseph's Cemetery -St. Joseph Elementary School -St. John's Lutheran Church -St. Joseph Church -St. Joseph's Hall -St. Joseph's Rectory	Snyder	on-site and within 400 m study area	75

For footnotes see Page 44

Table 3.2 (cont'd)

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
PI11E	-	-St. John's Lutheran Cemetery -St. Joseph's Cemetery -St. Joseph Elementary School -St. Joseph's Hall -St. Joseph's Rectory -St. Joseph Church -St. John's Lutheran Church -Stevensville Fire Hall -Stevensville Mini-Park (part of conservation area) -United Empire Loyalist Memorial Conservation Area -possible Beam Cemetery	Snyder Stevensville	on-site and within 400 m study area	75 1,000
PI12E	-International Country Club	-International Country Club -Cemetery (possibly abandoned)	Stevensville Douglastown	0.3 km 0.5 km	1,000 375
PI14E	-St. John's Anglican Church and Cemetery	-Cemetery (possibly abandoned)	Stevensville	2.0 km	1,000
PI15E	-	-Stevensville Public School	Stevensville	within 400 m study area	1,000
PI16E	-	-Stevensville Public School	Stevensville	within 400 m study area	1,000
PI21E	-	-	Welland	0.2 km	45,417

For footnotes see Page 44

Table 3.2 (cont'd)

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
PI30E[4]	-Cemetery	-	Port Robinson	abutting 400 m study area	860
PI131E[4]	-	-United Empire Loyalists Conservation Area -Stevensville Conservation Area	Stevensville Snyder	0.75 km 0.75 km	1,000 75
PI34E[4]	-Welland Feeder Canal -Niagara South Rowing Club	-Works Department -St. George Park	Welland	abutting 400 m study area	45,417
LF2E	-	-	Welland	0.2 km	45,417
LF6E[4]	-BMX Track	-Memorial Park	Welland	within study area	45,417
LF7E[4]	-	-Glenwood Park -John Deere Playground -Bridgeview Elementary School	Welland	within study area	45,417
LF8E[4]	-Niagara South Rowing Club -Welland Feeder Canal -John Deere Playground -Bridgeview Elementary School	-	Welland	within study area	45,417
LF10E[4]	-Cemetery	-	Cooks Mills	1.4 km	500

For footnotes see Page 44

Table 3.2 (cont'd)

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
PI1C	-	-Canadian Reformed Church of Smithville (at edge of study area) -John Calvin School of Smithville (private, elementary) (at edge of study area) -Niagara Public Works Department, Smithville Yard (at edge of study area)	Smithville	0.3 km	1,976
PI22C[4]	-	-	Smithville	0.5 km	1,976
PI2W	-	-Ancaster Double Rink -Shaver Family Cemetery	Ancaster	0.4 km	14,428
LF2W		-Seneca Unity Public School	York	5.6 km	168
PI15N[5]	-	-	Milton	0.2 km	29,591
PI3A1	-Bramalea Christian Fellowship Church (under construction)	-Mayfield Recreation Complex -Mayfield Secondary School	Brampton	3.0 km	149,030
LF2A1	-Bramalea Christian Fellowship Church (under construction)	-Mayfield Recreation Complex -Mayfield Secondary School	Brampton	3.0 km	149,030

For footnotes see Page 44

Table 3.2 (cont'd): SITE AREAS WITH MODERATE CONSTRAINTS

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
PI4E	-	-park -possible historic buildings (3)	Niagara Falls	2.0 km	70,960
PI6E	-Canadian-Hungarian Cultural Centre	-possible historic farm (at edge of study area)	Niagara Falls Cooks Mills	3.5 km 3.2 km	70,960 500
PI26E	-Crowland Community Park -Niagara Falls Fire Hall	-United Church of Canada, Lyons Creek & Cemetery -Willo-Dell Golf Club	Cooks Mills	1.1 km	500
PI27E[5,6]	-	-park -possible historic buildings (2) -Grassybrook Park -Canadian-Hungarian Cultural Centre -Biggar Farm (possible historic farm) (at edge of study area)	Niagara Falls	2.2 km	70,960
PI37E[4]	-Willoughby Marsh Conservation Area	-Willoughby Marsh Conservation Area -Rolling Meadows Golf & Country Club	Snyder	4.2 km	75
LF3E	-Canadian-Hungarian Cultural Centre	-possible historic farm (at edge of study area)	Niagara Falls Cooks Mills	3.5 km 3.2 km	70,960 500
LF4E	-Crowland Sport Club	-Rolling Meadows Golf & Country Club	Cooks Mills	2.3 km	500
LF2C	-	-Welland Feeder Canal	Wainfleet	0.4 km	206

For footnotes see Page 44

Table 3.2 (cont'd)

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
LF3C	-	-Elcho United Church & Cemetery -Chippawa Creek Conservation Area	Wellandport	1.8 km	200
LF8C	-	-Bethel Church (possibly historic) -Brethren in Christ Church	Wellandport	2.8 km	200
LF13C[4]	-	-Caistor Centre Free Methodist Church	Caistor Centre	0.2 km	N/A
LF15C[4]	-Nature and Wildlife Sanctuary	-	Beckett's Bridge Perry	0.4 km 0.4 km	N/A N/A
LF4W[6]	-	-Binbrook Conservation Area -Binbrook Little Theatre (at edge of study area) -Binbrook Baptist Church & Cemetery (at edge of study area) -Binbrook Fairgrounds (at edge of study area)	Binbrook	at edge of 400 m study area	306
LF7W[5]	-	-Binbrook Township Roads Department (at edge of study area) -Famee Furlano Italian Club and Park -Century Farm (at edge of study area)	Binbrook	0.8 km	306

For footnotes see Page 44

Table 3.2 (cont'd)

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
LF11W	-possible historic building (Butter Homestead) -Century Farm	-	Ancaster	4.0 km	14,428
LF2N[6]	-	-Hansa Haus -Derrydale Golf Course -Derry West Cemetery (historic) -Peel Public Works Yard No. 2	Derry West	within 400 m study area	110
LF3N[6]	-Peel Public Works Yard No. 2	-Derrydale Golf Course -Assumption Cemetery -Derry West Cemetery (historic)	Brampton	1.4 km	149,030
PI3N[6]	-Hansa Haus	-Derrydale Golf Course -Derry West Cemetery (historic) -Greek Orthodox Community Church (at edge of study area) -The Horse Centre (at edge of study area) -Future Church site	Derry West	within 400 m study area	110
PI4N[6]	-	-Hansa Haus -Derrydale Golf Course -Derrydale West Cemetery (historic) -Peel Public Works Yard No. 2	Derry West	within 400 m study area	110

For footnotes see Page 44

Table 3.2 (cont'd)

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
PI5N[6]	-Peel Public Works Yard No. 2	-Derrydale Golf Course -Assumption Cemetery -Derry West Cemetery (historic)	Brampton	1.4 km	149,030
PI12N[5]	-	-Sixteen Valley Conservation Area (at edge of study area -Camp (name unknown)	Milton	4.1 km	29,591
PI14N[5]	-	-Sixteen Valley Conservation Area -Camp (name unknown) (at edge of study area)	Milton	4.5 km	29,591

For footnotes see Page 44

Table 3.2 (cont'd): SITE AREAS WITH LOW CONSTRAINTS

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
PI7E	-	-	Cooks Mills	1.2 km	500
PI8E	-	-	Port Robinson	1.3 km	860
PI13E	-	-International Country Club	Ridgemount	within 400 m study area	N/A
		-Cemetery (possibly abandoned)	Douglastown	1.4 km	375
PI17E[6]	-	-Crowland Kartway Go-Cart Rentals -Welland County Motorcycle Club and Speedway -Niagara Region Department of Public Works Yard	Welland	2.1 km	45,417
PI18E	-	-	Welland	1.2 km	45,417
PI19E	-	-	Welland (Crowland)	2.0 km	45,417
PI20E	-	-	Welland Junction	1.8 km	N/A
LF1E	-	-	Cooks Mills	1.5 km	500
LF9E[4]	-	-Willo-Dell Golf Club	Niagara Falls	2.5 km	70,960
LF12E[4]	-	-Rolling Meadows Golf & Country Club	Niagara Falls	4.6 km	70,960
PI2C	-	-Caistor Centre Free Methodist Church	Smithville	6.6 km	1,976

For footnotes see Page 44

Table 3.2 (cont'd)

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
PI11C[4]	-	-	Bismark St. Ann's Wellandport	1.5 km 3.3 km 3.0 km	50 75 300
PI15C[4]	-	-	Wainfleet	1.0 km	206
PI19C[4]	-	-	Caistorville Caistor Centre	1.7 km 2.6 km	150 N/A
PI21C[4]	-	-	Smithville	2.4 km	1,976
PI25C[4]	-	-	Wellandport	1.0 km	200
PI26C[4]	-	-	Wellandport	2.6 km	200
LF1C	-	-O'Reilly's Cemetery -Welland Feeder Canal	Welland	2.1 km	45,417
LF9C	-possible historic building	-	Wellandport	2.5 km	200
LF12C[5]	-	-	Caistor Centre	2.0 km	N/A
LF18C[4]	-	-	Wellandport	1.0 km	200
LF24C[4]	-	-	Smithville	2.3 km	1,976
LF25C[4]	-	-	Bismark	2.9 km	50
LF29C[4]	-	-	Wellandport	1.3 km	200
LF30C[4]	-	-	Wellandport	1.7 km	200

For footnotes see Page 44

Table 3.2 (cont'd)

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
LF3W	-	-	Sinclairville Caistorville Binbrook	2.7 km 3.1 km 3.3 km	N/A 150 306
LF5W	-	-	Caledonia	4.3 km	1,430
LF10W	-	-Onondaga Baptist Church and and Cemetery	Middleport	3.8 km	62
LF13W	-	-	York	1.0 km	168
LF14W[4]	-	-	Caledonia	4.6 km	1,430
PI1N	-	-Hunterbrook Farms - Horse Boarding/Riding	Milton	3.0 km	29,591
PI2N	-	-Hunterbrook Farms - Horse Boarding/Riding	Milton	3.0 km	29,591
PI6N[6]	-	-Brampton Golf & Country Club (at edge of study area) -Peel Public Works Yard No. 2	Brampton	2.5 km	149,030
PI10N[5]	-	-Omagh Community Park (at edge of study area)	Milton	3.2 km	29,591
PI11N[5]	-	-Omagh Community Park (at edge of study area)	Milton	3.3 km	29,591
PI13N[5]	-	-	Milton	5.0 km	29,591
LF1N	-	-Century Farm	Milton	1.5 km	29,591

For footnotes see Page 44

Table 3.2 (cont'd)

Site Area	Features		Nearest Population Concentrations		
	On-Site	In Study Area	Name	Distance[1]	Population[2]
LF4N	-Century Farm	-	Milton	2.5 km	29,591
PI1A1	-	-	Brampton	1.0 km	149,030
PI2A1	-	-	Brampton	2.0 km	149,030
LF1A1	-	-	Brampton	1.0 km	149,030

FOOTNOTES:

1. Distance was measured from maps at a scale of 1:50,000 and is approximate only. The edge of the study area was taken as the point of measurement to the edge of the nearest population concentration.

2. The population figures are approximate. The figures were obtained from the 1981 Census, Municipal Directory (1983) and, where no published population figures were available, from municipal representatives.

3. Site Classification System:

   LF - indicates a landfill, or landfill in combination with a physical /chemical treatment plant and/or incinerator
   PI - indicates a partially integrated site; the facility components would include a physical/chemical treatment plant and/or incinerator
   The number indicates the sequence in which a site was numbered.
   N - denotes a site situated north of Llake Ontario
   W - deotes a site situated west of the western end of Lake Ontario
   C - denotes a site situated in the central portion of the Niagara Peninsula
   E - denotes a site situated in the eastern portion of the Niagara Peninsula.

4. Field visits and mapping at the 1:10,000 scale were not carried out for these sites because they were rejected due to constraints identified by other consulting team members. The data shown in this table are based on our mapping and analysis carried out at the 1:50,000 scale.

5. These are site areas that were identified during the candidate site identification stage.

6. The site area is ranked lower than suggested by our guidelines (see Page 31) due to the consultant's judgement of the significance of the community and recreation features.

In a number of instances, features were identified just beyond the 400 metre study area. Because the property boundaries were generally unknown at this stage it was considered appropriate to include these features as "in the study area" for the site area rankings. These features are noted as "at the edge of the study area" on Table 3.2.

The site areas were classified as high, moderate and low constraint. The classification of the site areas is presented in Table 3.2 and provides the list of features and the nearest population concentrations associated with each site area. Not all site areas underwent socio-economic field investigation because they were excluded prior to socio-economic analysis due to high constraints identified by other disciplines on the site selection team. The process of site identification led to some additional site areas being identified during the "identification of candidate sites" stage. These site areas were subjected to 1:10,000 scale field investigations and the information is included in Table 3.2.

Site area analysis - an example

The site area LF4W is provided as an example of the assessment and ranking of the site areas. The facilities within 400 metres of the site area, and population concentrations within 1 kilometre of the site area, are provided on the sample field observation form in Appendix D, and a map of these facilities is provided (Map I-13) in this report. The site area had a feature within its study area and several features at the edge of the study area. The minor population concentration of Binbrook is less than 1 km from the site. With these characteristics, LF4W fulfills the criteria as a site area with moderate constraints and is so ranked on page 37, Table 3.2.

The site area rankings were integrated with those of the site selection team disciplines in order to screen out site areas from further consideration. The result of this exercise was the identification of 16 potential sites which would undergo initial comparative evaluation.

OWMC Ontario Waste Management Corporation

Consultant:

ier
Institute of Environmental Research Inc.

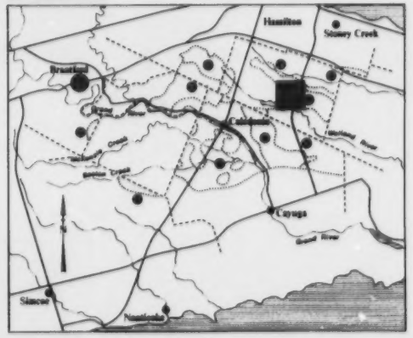
Legend:

- Institution for the disabled
- Regional/local shopping centre
- Public building
- Public elementary school
- Separate elementary school
- Public secondary school
- Private secondary school
- School board property - storage or maintenance
- School board property - vacant or undeveloped
- Library
- Church
- Cemetery
- Conservation area
- Regional park
- Municipal park
- Golf course
- Commercial recreation facility
- Community centre
- Cultural centre
- Theme park
- Fairground / Exhibition
- Campground
- Public sports facility
- Private sports facility
- Welland Feeder Canal

not to scale
MAXIMUM POTENTIAL ACQUISITION BOUNDARY — 400m STUDY AREA

Key Map: **LF-4 West**

Lots 3,4,5; Concession IV (Block 4); Township of Glanbrook, formerly Township of Binbrook



Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features POTENTIAL SITE IDENTIFICATION

October 1984 **MAP 1-13**

CHAPTER 4

COMPARISON OF POTENTIAL SITES AND IDENTIFICATION OF CANDIDATE SITES

4.1 INTRODUCTION

During this stage, the 16 potential sites were combined into 8 integrated and 9 partially integrated siting options. In the previous rounds of analysis, our data permitted us to make recommendations for exclusion of some site areas. At this stage there were a number of remaining siting options which were not excluded on social factors but for which further data gathering and analysis were warranted. This additional analysis would permit further comparisons and rankings.

The siting options were compared and, based on the collective input of the study team, reduced to a short list of candidate sites. In order to compare the siting options, the socio-economic factors were refined and some additional factors were introduced. The factors are described on page 49.

At this stage, the study areas were refined as described on page 50.

During the latter part of the potential site identification stage, field investigations were introduced as a means to obtain data on the sites. Field investigations continued to be the main source of data for this final stage of Phase 3b. The field investigations and the data obtained in the site and site vicinity and along possible access routes are described on pages 50-53.

Once the field investigations had been carried out, the potential siting options were compared and ranked employing the socio-economic factors. A description of the socio-economic analysis used to compare the siting options is provided on pages 53-74.

4.2 THE PROCESS

INITIAL COMPARATIVE EVALUATION

To compare the 17 potential siting options and arrive at a short list of sites to undergo detailed comparative evaluation, the following steps were undertaken:

1) the socio-economic factors were refined;
2) field investigations were undertaken of the sites[1], in the site vicinities and along possible access routes;
3) the potential sites and site options were compared and ranked from a socio-economic perspective.

The following sections outline these three steps.

---

1. The field observations were made from public roads. No on-site investigations were undertaken.

4.2.1 THE FACTORS

The factors used to analyse and compare the potential siting options reflect the goals and objectives of the site selection process as well as the issues and concerns raised through the public participation program.[1] The key considerations for evaluating siting options were the number of people, number and type of community and recreation features and historic features which would be displaced or affected if a siting option was selected. To address these considerations the following factors were utilized:

1) Community and recreation features: the features used in the identification of potential sites, pages 23-25 and Table 3.1, were applied again for initial comparative evaulation. Any known planned or proposed features were also considered. Identified historic features, as well as possible historic buildings noted during site investigations were also assessed during this stage.[2]

2) Estimated population: 1) dwelling counts and average household size data were used to estimate the number of residents on-site and within the study areas. 2) total population within 5 kilometres of each site was estimated also.

3) Population concentrations: population concentrations are defined as hamlets and villages, small towns, and larger municipalities.

4) The general community character was described for each site and site vicinity. Predominate land uses and observable trends in terms of land use changes were identified and used to characterize each site and site vicinity.

Aappendix B provides detailed definitions of these factors, their significance and the method in which each was used.

---

1. Page 4 of this report provides an outline of the goals and objectives. tives. Refer to page 47 of OWMC, Facilities Development Process, Phase 3 Report, March 1984, for a detailed discussion of the goals and objectives and M. M. Dillon, Site Selection Process, Phase 3b: Selection of Candidate Sites, Site Selection - Volume 3 - Identification of Candidate Sites, 1984.
2. The heritage experts were B. McPhail and P. Dilse.

4.2.2 BUFFER ZONES AND STUDY AREAS

For the purposes of evaluating the sites, the buffer zones and study areas were refined by M.M. Dillon.[1] The size of the buffer zones and study areas varied depending upon the facility option which was under consideration for each site.

A 500 metre study area was employed around landfill (LF) sites and the landfill portions of integrated sites. These study areas comprise the "site vicinity" and represent an area which could be affected by the development of waste management facilities.

For partially integrated (PI) sites and fully integrated sites, a technical buffer zone of 400 metres was delineated around the operations area. The 400 metre buffer zone was considered as part of "the site". The partially integrated (PI) sites also had a 1000 metre study area delineated around the operations area.

Maps I-14 to I-31 in this report illustrate these buffer zones and study areas and their locations relative to the sites.

4.2.3 FIELD INVESTIGATIONS

Site and site vicinity

The field investigations served several purposes. They provided an opportunity to verify data obtained from previous site visits and through interviews and secondary sources. As well, additional information was

1. A full description/discussion of the buffer zones and study areas are provided in M.M. Dillon, Facilities Characteristics and Technical Buffer Zones, 1984.

collected on the sites and site vicinities. The following information was gathered through the field investigations:

1) Community and recreation features: the same type of data was collected for the features as during the field investigations of the site screening stage (pages 29-30).

   Field information on features was supplemented with secondary source and interview material collected during previous stages of Phase 3b regarding existing and any known planned or proposed community and recreation features. Many features identified in previous rounds of analysis had resulted in sites or parts of site areas being recommended for exclusion. However, at this stage, where a remaining feature did not appear to serve a sensitive population nor did not appear to be in daily use, the site would still be retained if, in the consultant's judgement, the feature could continue in use alongside the OWMC facility.

2) Estimated population: a dwelling count was taken for each site and site vicinity. Each dwelling count was multiplied by the average household size (1981 Census) for the municipality in which the site is located to obtain an estimate of the population which could be displaced (on-site) or affected (the site vicinity).

   It should be noted that the population is an estimate only. The average household size figures apply to each municipality as a whole, and variations in household size at the scale investigated are possible.

3) Community character: the general community character was described for each site and site vicinity on the basis of predominant existing land uses and the apparent rate and nature of land use changes.

The data collected during the field investigations were recorded on the field observation forms developed during the identification of potential sites, and on 1:10,000 base maps. The maps of each of these sites are provided in Maps I-14 to I-31 in this report. The socio-economic maps were integrated with those of the other site selection team consultants to develop composite site maps.

Access routes

To compare the potential sites in more detail, local and regional access routes for each siting option were assessed. The alternative access routes were provided by M.M. Dillon, the transportation consultants. Field investigations[1] were conducted along each potential access route.

The factors employed for the access route analysis were:

1) Community and recreation features: a listing and general description of features were gathered along the access routes. Only those features immediately adjacent to the local and regional access routes were noted; those in the vicinity of, but not abutting, the access routes and potentially affected were not identified. A more comprehensive investigation along access routes will be made during the detailed comparative evaluation phase.

2) Estimated population: a dwelling count was taken along the rural sections of the local and regional access routes. An estimate of the population which might be affected was obtained by applying the dwelling count to the average household size (1981 Census) for the municipality in which the access route is located.

   The estimated population affected is limited to the population abutting the access routes; population in the vicinity of the access routes has not been estimated.

3) Population concentrations: population concentrations were noted along local and regional access routes. The number of people residing in the concentrations were obtained through a variety of sources. The population of larger municipalities was obtained from the 1981 Census; smaller municipal populations were obtained from the municipal assessment data or estimates from a municipal representative. In instances where formal population figures were not available, dwelling counts and the average household size were used to estimate population.

1. Field observations were made from public roads. No on-site investigations were undertaken.

The data collected during the field investigations were recorded on field observation forms developed during the potential site identification stage and on 1:50,000 base maps. This information was integrated with the data provided by the other site selection team consultants.

4.2.4 THE SOCIO ECONOMIC ANALYSIS

Each siting option was ranked on the basis of:

1) community and recreation features;
2) estimated population;
3) community character;
4) access route suitability

Community and recreation features

The siting options were reviewed in terms of the community and recreation features which would potentially be displaced. Thirteen of the 17 siting options have community or recreation features on-site (Table 4.1). Eight siting options have a few features on-site that could be displaced. The features that could be displaced include a public works yard, Century Farm and possible historic buildings. These were not considered as significant constraints to the OWMC development.

Four of the sites contain community features that could pose some degree of constraint to the OWMC facility. At two sites, the features are just outside of the original study zone used in the socio-economic site analysis but fall within the site acquisition zones which were more precisely defined after the completion of our field investigations. These are:

LF3E - Canadian-Hungarian Cultural Centre

LF3C - Elcho United Church and Cemetery

TABLE 4.1

SOCIO-ECONOMIC FACTORS BY SITING OPTION

FACTOR	SITING OPTION					
	LF4N[1]	LF10W[2]	LF11W	LF3C	LF8C	LF9C
ESTIMATED POPULATION						
SITE[4]	20	29	26	32	25	11
SITE VICINITY[4]	42	52	122	25	39	53
FEATURES						
SITE	• Century Farm	• Possible historic buildings (3)	• Butter Homestead • Possible historic building	• Elcho United Church and Cemetery[3] (historic)	• None	• Possible historic building
SITE VICINITY	• None	• Onondaga Baptist Church and Cemetery	• Century Farm	• None	Bethel Church	• None
COMMUNITY CHARACTER/ ADDITIONAL COMMENTS	• Urban fringe area • No industry • Mix of rural residential and farm dwellings	• Rural area • No industry • Mix of rural residential and farm dwellings	• Rural area • No industry • Primarily rural residential dwellings; some farm dwellings	• Rural area • No industry • Mix of rural residential and farm dwellings	• Rural area • No industry • Mix of rural residential and farm dwellings	• Rural area • No industry • Mix of rural residential and farm dwellings

For footnotes see Page 59

Table 4.1 (cont'd)

FACTOR	SITING OPTION					
	LF1E[2]	LF3E	PI1A1/LF2N	PI1N[2]/LF2N	PI1N[2]/LF4N	PI13N/LF2N
ESTIMATED POPULATION						
SITE	45	31	PI1A1 - 17 LF2N - 16	PI1N - 42 LF2N - 16	PI1N - 42 LF4N - 20	PI13N - 13 LF2N - 16
SITE VICINITY	62	31	PI1A1 - 38 LF2N - 52	PI1N - 45 LF2N - 52	PI1N - 45 LF4N - 42	PI13N - 58 LF2N - 52
FEATURES						
SITE	• None	• Canadian-Hungarian Cultural Centre • Possible historic building	PI1A1 • Possible historic building LF2N • Region of Peel Works Yard No. 2 • Possible historic building	PI1N • Hunterbrook Farms • Possible historic building LF2N • Region of Peel Works Yard No. 2 • Possible historic building	PI1N • Hunterbrook Farms • Possible historic building LF4N • Century Farm	LF2N • Region of Peel Works Yard No. 2 • Possible historic building
SITE VICINITY	• None	• None	LF2N • Hansa Haus • Derrydale Golf Course • Derry West Historic Cemetery	LF2N • Hansa Haus • Derrydale Golf Course • Derry West Historic Cemetery	• None	LF2N • Hansa Haus • Derrydale Golf Course • Derry West Historic Cemetery

For footnotes see Page 59

Table 4.1 (cont'd)

FACTOR	SITING OPTION					
	LF1E	LF3E	PI1A1/LF2N	PI1N/LF2N	PI1N/LF4N	PI13N/LF2N
COMMUNITY CHARACTER/ ADDITIONAL COMMENTS	• Urban fringe area • Within view of industry • Mix of rural residential and farm dwellings	• Urban fringe area • Within view of industry • Mix of rural residential and farm dwellings	• Urban fringe area • Within view of industry • Primarily rural residential dwellings; some farm dwellings	PI1N • Urban fringe area • No industry • Mix of rural residential and farm dwellings LF2N • Urban fringe area • Within view of industry • Primarily rural residential dwellings; some farm dwellings	• Urban fringe area • No industry • Mix of rural residential and farm dwellings	PI13N • Urban fringe area • No industry • Mix of rural residential and farm dwellings LF2N • Urban fringe area • Within view of industry • Primarily rural residential dwellings; some farm dwellings

For footnotes see Page 59

Table 4.1 (cont'd)

FACTOR	SITING OPTION				
	PI13N/LF4N	PI2W/LF10W	PI2W/LF11W	PI18E/LF1C	PI27E/LF1E[2]
ESTIMATED POPULATION					
SITE	PI13N - 13 LF4N - 20	PI2W - 16 LF10W - 29	PI2W - 16 LF11W - 26	PI18E - 31 LF1C - 13	PI27E - 17 LF1E - 45
SITE VICINITY	PI13N - 58 LF4N - 42	PI2W - 23 LF10W - 52	PI2W - 23 LF11W - 122	PI18E - 56 LF1C - 13	PI27E - 17 LF1E - 62
FEATURES					
SITE	LF4N • Century Farm	PI2W • Possible historic buildings (3) • Bradshaw Family Cemetery (historic) LF10W • Possible historic buildings (3)	PI2W • Possible historic buildings (3) • Bradshaw Family Cemetery (historic) LF11W • Possible historic building • Butter Homestead	• None	• None
SITE VICINITY		PI2W • Shaver Family Cemetery (historic) LF10W • Onondage Baptist Church and Cemetery	PI2W • Shaver Family Cemetery (historic) LF11W • Century Farm	• None	PI27E • Grassybrook Park o Canadian-Hungarian Cultural Centre

For footnotes see Page 59

Table 4.1 (cont'd)

FACTOR	SITING OPTION				
	PI13N/LF4N	PI2W/LF10W	PI2W/LF11W	PI18E/LF1C	PI27E/LF1E
COMMUNITY CHARACTER/ ADDITIONAL COMMENTS	• Urban fringe area • No industry • Mix of rural residential and farm dwellings	PI2W • Emerging industrial area • Primarily rural residential dwellings; some farm dwellings LF10W • Rural area • No industry • Primarily rural residential dwellings; some farm dwellings	PI2W • Emerging industrial area • Primarily rural residential dwellings; some farm dwellings LF11W • Rural area • No industry • Primarily rural residential dwellings; some farm dwellings	PI18E • Industrial area • Primarily rural residential dwellings LF1C • Urban fringe area • Within view of industry • Mix of rural residential and farm dwellings	• Urban fringe area • Within view of industry • Mix of rural residential and farm dwellings

For footnotes see Page 59

FOOTNOTES:

1. Site LF4N was analysed as both a potential fully integrated site and partially integrated site. It was subsequently rejected as an integrated site. Refer to M.M. Dillon, Site Selection Process, Phase 3B: Selection of Candidate Sites, Site Selection - Volume 3 - Identification of Candidate Sites, 1984.

2. Two potential site locations were considered for each of the LF10W, LF1E and PI1N. The data noted for each of these siting options represent a combination of the two site locations.

3. The Elcho United Church and Cemetery property will not be acquired. This property is located at the edge of the acquisition area.

4. Site is defined as the area required for siting the facilities and the surrounding area which could be acquired (potential site acquisition area). Site vicinity is the 500 metre or 1,000 metre study area defined around each site. The boundaries of these areas are noted on Maps I-14 to I-31.

Because both of these features are just inside the edge of the site acquisition zones, and were not known to be in daily use by sensitive populations, it was determined that while the features are constraints, they are not sufficient to exclude the sites at this stage of analysis. OWMC has also made a commitment that the Elcho United Church and Cemetery would not be acquired if site LF3C is ultimately selected.

At LF11W, the Butter Homestead is located on the site but its precise historic significance had not been determined at the time of initial site ranking. Further, depending on the configuration of the OWMC facilities on the site, the Homestead building could co-exist with the OWMC facility. At PI2W the Bradshaw Family Cemetery is situated at the edge of the 400 metre buffer zone but the existence of the OWMC facility need not interfere with the operation or maintenance of the cemetery.

Table 4.2 shows the ranking of sites by the number of features on-site. A rank of 1 was assigned to all sites with no features on-site. A rank of 3 was assigned to all sites with one or more features, which, in the judgement of the consultant, could probably be accommodated and co-exist with the OWMC facility. A rank of 5 was assigned to all sites with one or more features which the consultant judged to pose a higher degree of constraint but was still not sufficient to recommend site rejection. Features in the site vicinity were not considered in this analysis because they were felt to be features that could continue in use even if the facility was sited.

Estimated Population: on-site and in the site vicinity

The population that would be displaced was estimated for the siting options. The area used to arrive at these estimates was the potential site acquisition

TABLE 4.2

RANKING OF SITING OPTIONS
BY COMMUNITY AND RECREATION FEATURES ON-SITE[1]

Ranking[2]	Site
1	LF8C
	LF1E
	PI18E/LF1C
	PI27E/LF1E
2	
3	LF4N
	LF10W
	LF9C
	PI1A1/LF2N
	PI1N/LF2N
	PI1N/LF4N
	PI13N/LF2N
	PI13N/LF4N
4	
5	LF11W
	LF3C
	LF3E
	PI2W/LF10W
	PI2W/LF11W

1. For community and recreation features on each site, refer to Table 4.1, pages 54-59.

2. Rank 1 indicates sites with no features located on-site. A rank of 3 was assigned to all sites with one or more features, which, in the judgement of the consultant, could probably be accommodated and co-exist with the OWMC facility. A rank of 5 was assigned to all sites with one or more features which the consultant judged to pose a higher degree of constraint.

area, as defined on Maps I-14 to I-31 in this report. The on-site population potentially displaced ranged from an estimate of 11 to 62 persons (Table 4.1). For each siting option, the number of people who would likely be affected in some way due to their proximity to the potential site was estimated. This is an estimate of the number of people within the study areas as defined in Section 4.2.2. The range of population in the site vicinities (study areas) varied from 25 to 145 people.

Owing to the lack of population characteristics data, it was felt that only a general assessment of each siting option could be done at this stage of the site selection process. By adding the number of people who would be displaced, with those in the site vicinity, one is able to estimate the minimum number of people who could be affected by the facility. These two population estimates were combined for each siting option to obtain a relative ranking of the siting options based on the number of people who will be affected by the facility in some way or another. This ranking is shown in Table 4.3.

Siting options ranked number 1 are the most preferred given these have the fewest people potentially affected. Siting options ranked number 5 are the least preferred.

Population: 5 kilometre zone

One of the guiding principles of the site selection process is to maintain a second level of protection for people and the environment. With the possibility of air dispersion impacts in mind, IER was requested to calculate the population numbers within 5 kilometres of each of the potential sites.

TABLE 4.3

RANKING OF POPULATION POTENTIALLY AFFECTED ON-SITE AND IN SITE VICINITY

Rank[1]	Population Range	Siting Option	Estimated Population
1	0-50	-	-
2	51-100	LF4N	62
		LF10W	81
		LF3C	57
		LF8C	64
		LF9C	64
		LF3E	62
3	101-150	LF11W	148
		LF1E	107
		PI1A1/LF2N	123
		PI1N/LF4N	149
		PI13N/LF2N	139
		PI13N/LF4N	133
		PI2W/LF10W	120
		PI18E/LF1C	113
		PI27E/LF1E	141
4	151-200	PI1N/LF2N	155
		PI2W/LF11W	187
5	200+	-	-

1. Rank number 1 is the most acceptable; rank number 5 the least acceptable.

Table 4.4 shows the sites and the 1981 population levels within a 5 kilometre radius.

Based on this second level of protection principle a site ranked 1 is preferable over a site ranked 5. Based on this criterion of total population within 5 kilometres, site PIIA1 would be the least preferred when the second level of protection principle is applied. However, owing to the lack of information concerning impacts beyond the site vicinity, this analysis did not enter into our overall ranking of sites and, this fact by itself was not sufficient to recommend any site exclusions at this stage.

Community character

The sites were ranked on the basis of the compatibility of community character and the proposed facility. Five community character types were described based on the pedominant land uses and the apparent rate and type of land use changes. These are:

1) heavy industrial areas;

2) urban fringe industrial areas of those within view of an industrial area, and separated from residential/ agricultural uses;

3) emerging industrial areas in proximity to residential and rural areas;

4) rural residential urban fringe area with some agricultural activity, or urban transition areas;

5) rural areas with rural residential and agricultural uses.

From the perspective of the community character assessment, the proposed waste treatment facilities were considered most compatible with areas of heavy industry and least compatible with predominantly rural areas of rural residential and agricultural uses. Table 4.1 provides the

TABLE 4.4

RANKING OF POPULATION WITHIN 5KM OF POTENTIAL SITES

Rank[3]	Population Range	Site No.	Population 1981[1] 0-5km Radius
1	<5,000	LF1C	910
		LF8C	2,161
		LF9C	2,161
		LF3C	1,486[2]
		LF10W	1,464
		LF11W	1,464
		LF1E	2,655
		PI13N	4,618
2	5,000-9,999	PI2W	8,589
		LF3E	5,308
		LF4N	5,221
3	10,000-19,999	PI18E	16,761
		PI1N	11,101
		LF2N	17,303
4	20,000-29,999	PI27E	23,061
5	> 30,000	PI1A1	74,999

1. Population is based on Canada Census data, and includes those living within the geographic area covered by concentric rings extending from the road intersection nearest the site.

2. Data from Statistics Canada Enumeration Areas (EAs) are used to assign population to concentric zones. Within each EA, the point corresponding to highest population density is designated as the "centroid". Data for those centroids that fall within designated concentric rings are included in zonal tabulations. In cases where concentric rings do not encompass centroids, the population calculated by the Compusearch model appears as '0'. In the instance of LF3C where the Compusearch model showed '0' population, data were used to estimate population within a 5km radius of the site. Estimated population for LF3C, therefore, is 1,486.

3. Rank 1 is the most acceptable, and rank 5 is the least acceptable.

Source: Compusearch Market and Social Research Limited, Tradarea: Trade Area Analysis System, Toronto, Ontario.

description of the community character for the sites. Table 4.5 provides the ranking of the sites in terms of compatibility with the proposed facilities.

Because of the limited amount of data and the limited level of detail, it was not possible to use the community character factor to recommend the exclusion of any site. However, at this stage of analysis, the data were sufficient to permit us to identify the relative differences among the sites in order to rank them.

4.2.5 ACCESS ROUTE OPTIONS

The access route options for each integrated site and partially integrated siting option were ranked to identify the options preferred from a socio-economic perspective. The access routes were compared on the basis of the following socio-economic factors:

1) community and recreation features;
2) estimated population;
3) population concentrations.

When ranking the access route options, preference was given to those with the fewest residents, the smallest population concentrations, and the fewest community and recreation features.

In some instances, there was not a clear preference for one route over another. It was necessary to select between access route options with a large residential population and an option with a large number of community and recreation features. Professional judgement was used to determine the importance of the community and recreation features to assist in selecting

TABLE 4.5

SOCIO-ECONOMIC RANKING OF SITES:
COMMUNITY CHARACTER - COMPATIBILITY OF SITE AND FACILITY

RANK[1]	CRITERIA	SITES
1	- heavy industrial area	PI18E[2]
2	- urban fringe, industrial area; within view of industrial area; separated from residential/agricultural uses	LF1E[2] LF3E PI1A1 LF2N LF1C PI27E
3	- emerging industrial area; proximity to residential and rural areas	PI2W
4	- rural residential; urban fringe area with some agriculture - no industry - urban transition area	LF4N PI1N PI13N
5	- rural residential; agricultural - no industry - rural area	LF3C LF8C LF9C LF10W LF11W

1. Rank number 1 is the most compatible; rank number 5 is the least compatible.

2. Classification System:
PI indicates a partially integrated site; the facility components would include a physical/chemical treatment plant and/or an incinerator.
LF indicates a landfill, a landfill in combination with a physical/chemical treatment plant and/or an incinerator.
The number indicates the sequence in which a site was numbered when it was first identified.
N, E, C, W indicates the geographic location of a site.
N - denotes a site situated north of Lake Ontario
W - denotes a site situated west of the western end of the Lake
C - denotes a site situated in the central portion of the Niagara Peninsula
E - denotes a site situated in the eastern portion of the Niagara Peninsula

the preferred route. Features that were known to have or likely to attract large numbers of temporary populations and/or sensitive groups within the population were given preference over those which did not. Features such as hospitals, homes for the aged, schools, and large community features were considered more important than features such as public works yards, golf courses, small community centres and libraries, and historic buildings.

Sites LF4N, PI1N and PI13N have access route options from Highway 401 in the north and the QEW in the south. As the trucks are expected to arrive from both directions, the access route options from the north (Highway 401) were compared and the options from the south (the QEW) compared. The result was that two preferred access routes were identified for each site, one from Highway 401 and a second from the QEW.

The data used in the analysis of the access routes and the access route rankings are in Appendix E. The preferred access route options for each siting option are identified by the ranking of 1.

Suitability of access routes

The siting options were assessed in terms of the suitability of the preferred access routes. For this assessment, the access routes for each siting option were combined.[1]

1. The separate PI and LF sites necessitate the transfer of materials first to a PI site, and in some instances to the associated LF site, and then the treated wastes to the associated LF site for disposal. The access routes to the PI site, to the LF site (where applicable), and between the PI and LF site were assessed as one access route for the site option.

The estimated population, including the number and sizes of population concentrations on the access route contributed to comparison of the siting options. Siting options with access routes on which less than 100 people and no population concentrations are located were considered the best[1] while access routes through major population concentrations were ranked as poor.

Only features abutting each potential access route were identified during field investigations. The type and location of the feature were noted. Features located nearby but not directly abutting the access routes were not identified at this stage. Further, information on the nature and intensity of use of the features identified was not gathered at this stage. In the next phase, more detailed investigation of the features on the remaining access route options will be undertaken. For analysis at this stage, the access routes with fewer community and recreation features were preferred.

Table 4.6 provides the access route suitability guidelines that were used. The consultant's assessment of the significance of features, as discussed on page 31, also entered into the analysis and ranking of the access routes. Table 4.6 also provides the assessment of the siting options with respect to access route suitability based on the combined assessment of population data and community and recreation features.

1. The population level of 100 was determined by the socio-economic consultant with the guiding principle being that areas with lower population numbers would provide the greatest possibilities for access routes since fewer people would potentially be affected.

TABLE 4.6

SOCIO-ECONOMIC RANKING OF SITING OPTIONS:
SUITABILITY OF ACCESS ROUTES

RANK[2]	GUIDELINES	SITING OPTIONS[1]
1	- less than 100 people on route - no population concentrations - one feature or less	LF1E LF3E PI27E/LF1E
2	- more than 100 people on route - no population concentrations - two or three features	LF10W LF11W PI2W/LF10W PI2W/LF11W PI18E/LF1C
3	- several hundred people on route - through minor population concentrations - four or five features	PI1A1/LF2N PI13N/LF2N
4	- several hundred people on route - through minor population concentrations - six to eight features	PI1N/LF2N LF4N PI1N/LF4N PI13N/LF4N
5	- several hundred people on route - through major population concentrations - more than eight features	LF3C LF8C LF9C

1. Classification System:
   LF indicates a landfill, a landfill in combination with a physical/chemical treatment plant and/or incinerator.
   PI indicates a partially integrated site; the facility components would include a physical/chemical treatment plant and/or an incinerator.
   The number indicates the sequence in which a site was numbered when it was first identified.
   N,E,C,W indicate the geographic location of a site.
   - N - denotes a site situated north of Lake Ontario
   - W - denotes a site situated west of the western end of Lake Ontario
   - C - denotes a site situated in the central portion of the Niagara Peninsula
   - E - denotes a site situated in the eastern portion of the Niagara Peninsula

2. Rank 1 indicates siting options with the most suitable access routes; rank 5 indicates siting options with the least suitable access routes.

4.2.6 OVERALL SITE RANKING

The separate rankings provided in Tables 4.2, 4.3, 4.5 and 4.6 were not used to recommend any siting option for exclusion. Rather, the rankings were reviewed and integrated into an overall ranking of the siting options. Equal consideration was given to community and recreation features, estimated population affected, community character, and access route suitability. The overall ranking was determined by averaging the rankings based on community and recreation features with estimated population affected with community character compatibility with access route suitability. Rank 1 was assigned 1 point, rank 2 assigned 2 points and so on. Where the access route suitability ranking combined two sites that had different community character rankings, the community character rankings were averaged first and that average was then combined with the other rankings to arrive at the overall suitability rank (e.g., PI2W/ LFF10W option: community character ranking average 3 + 5 = 8 divided by 2 = 4; features ranking 5; population affected ranking 3; access route ranking 2; overall average is (4 + 5 + 3 + 2) divided by 4 = 3.5).

Table 4.7 presents the overall socio-economic ranking of the siting options. Those siting options ranked number 1 are preferred, from a socio-economic perspective and those ranked number 5 are least preferred. The level of analysis undertaken at this stage led to the identification of the relative differences among the siting options but did not permit the recommendation that a siting option be excluded from further consideration.

The ranking in Table 4.7 was used in conjunction with the rankings completed by other members of the site selection team. The rankings were integrated from all the consulting perspectives on the site selection team,

TABLE 4.7

INITIAL COMPARATIVE EVALUATION

Rank[1]	Community & Recreation Features (On-Site)	Estimated Population	Community Character	Access Route Suitability	Overall Siting Option Ranking[3]
1	LF8C LF1E PI18E/LF1C PI27E/LF1E		PI18E[2]	LF3E[2] LF1E PI27E/LF1E	LF1E
2		LF4N LF10W LF3C LF8C LF9C LF3E	LF1E LF3E PI1A1 PI27E LF1C LF2N	PI2W/LF10W LF10W LF11W PI2W/LF11W PI18E/LF1C	LF3E PI27E/LF1E PI1A1/LF2N PI18E/LF1C
3	LF4N LF10W LF9C PI1A[1]/LF2N PI1N/LF2N PI1N/LF4N PI13N/LF2N PI13N/LF4N	LF11W LF1E PI1A1/LF2N PI1N/LF2N PI1N/LF4N PI13N/LF2N PI13N/LF4N PI2W/LF10W PI18E/LF1C	PI2W	PI13N/LF2N PI1A1/LF2N	LF10W PI2W/LF10W LF4N LF8C LF11W PI1N/LF2N PI13N/LF2N PI1N/LF4N PI13N/LF4N
4		PI2W/LF11W PI27E/LF1E	LF4N PI1N PI13N	PI1N/LF2N LF4N PI1N/LF4N PI13N/LF4N	PI2W/LF11W LF3C LF9C
5	LF11W LF3C LF3E PI2W/LF10W PI2W/LF11W		LF3C LF8C LF9C LF10W LF11W	LF3C LF8C LF9C	

Most Preferred

Least Preferred

FOOTNOTES:

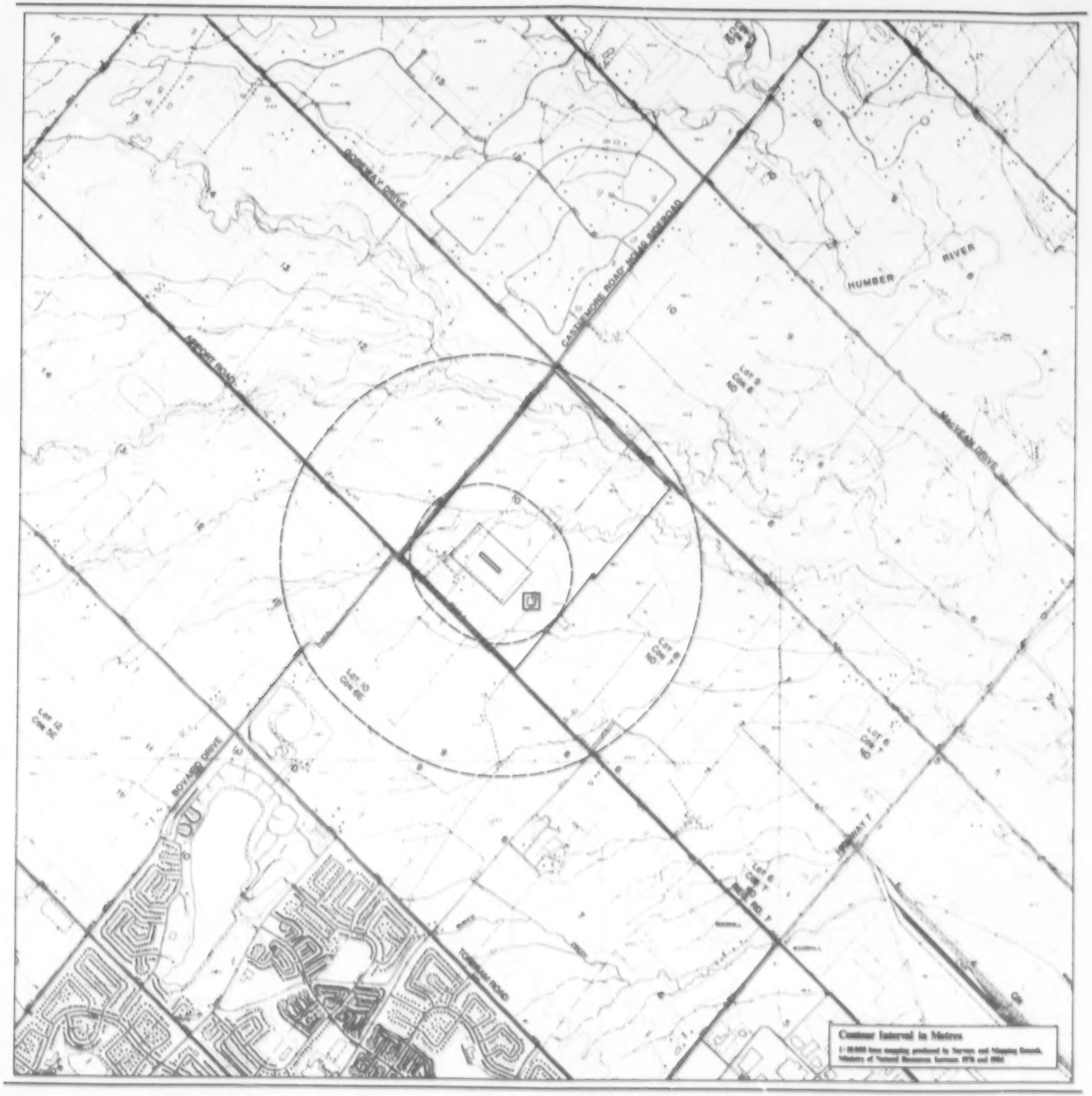
1. Ranking system: 1 indicates most preferred sites; 5 indicates least preferred sites.

2. Classification System:
   PI indicates a partially integrated site; the facility components would include a physical/chemical treatment plant and/or an incinerator.
   LF indicates a landfill, a landfill in combination with a physical/chemical treatment plant and/or incinerator.
   The number indicates the sequence in which a site was numbered when first identified.
   N,E,C,W indicate the geographic location of a site.
   - N - denotes a site situated north of Lake Ontario
   - W - denotes a site situated west of the western end of Lake Ontario
   - C - denotes a site situated in the central portion of the Niagara Peninsula
   - E - denotes a site situated in the eastern portion of the Niagara Peninsula

3. The sites within each rank are of equal rank.

and a short list of candidate sites was prepared to undergo detailed comparative evaluation. The guiding principle was to retain acceptable sites that would still provide the broadest possible range of choice.

Each of the sites remaining on the short list are illustrated on Maps I-15 to I-18, I-24, I-26 to I-28 and I-31 contained in this report.



OWMC Ontario Waste Management Corporation

Consultant:

ier Institute of Environmental Research Inc

Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground Exhibition
- Historic building
- Possible historic building
- Century farm

Key Map: **PI-1A1**

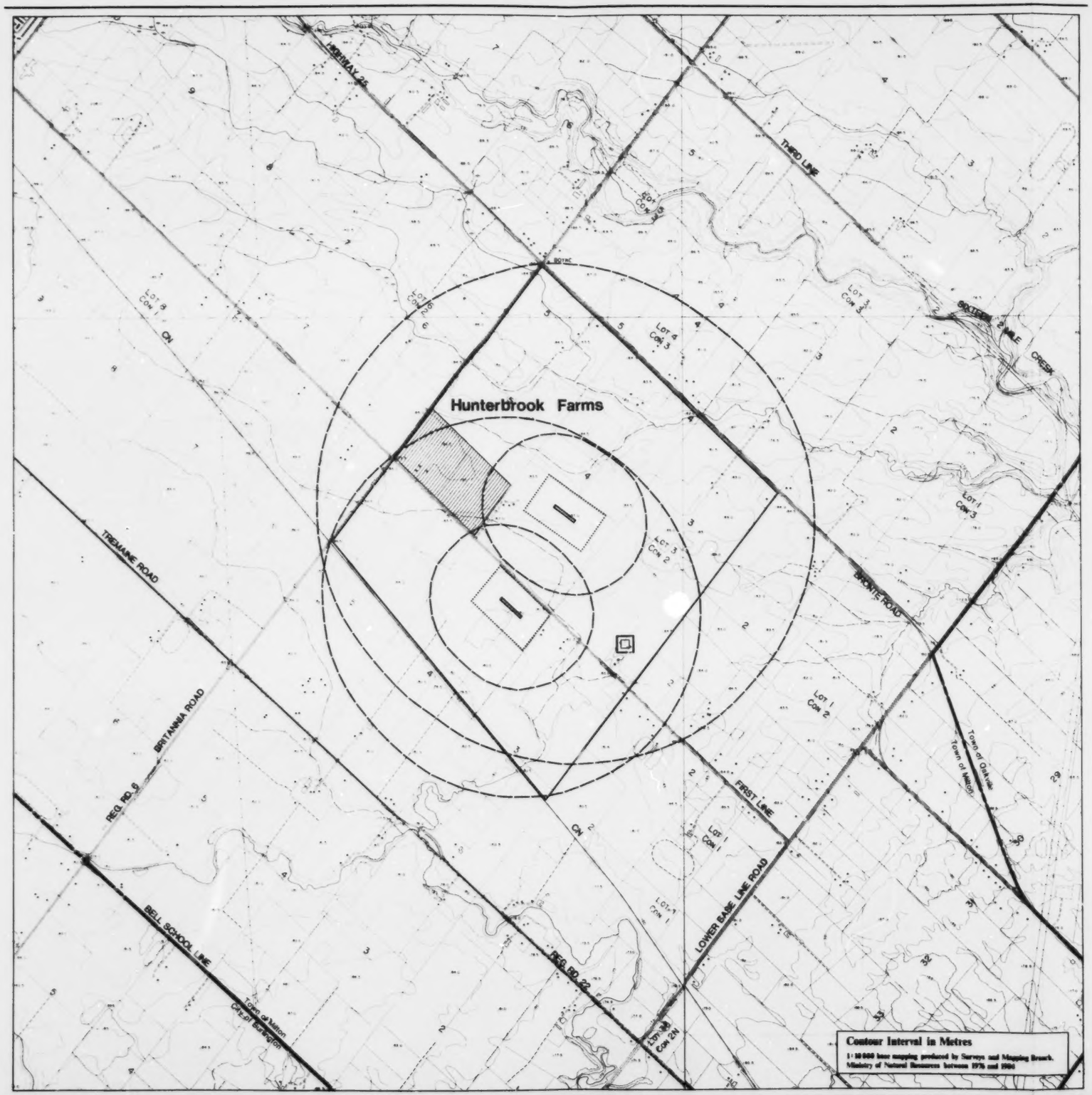
Lot 10 and Part of Lot 9; Concession VII; City of Brampton, formerly the Toronto Gore

Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP 1-14**



OWMC Ontario Waste Management Corporation

Consultant:

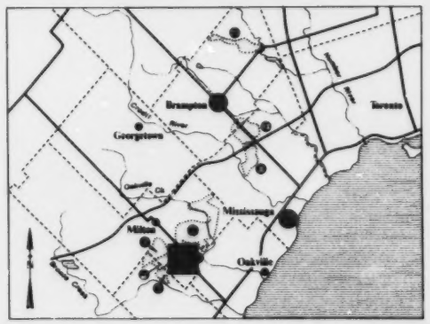
ier Institute of Environmental Research Inc.

Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm

Key Map: **PI-1 North**

Lots 3, 4 and 5; Concession II; Town of Milton; Parts of Lots 3, 4 and 5; Concession I; Town of Milton, formerly in the Township of Trafalgar



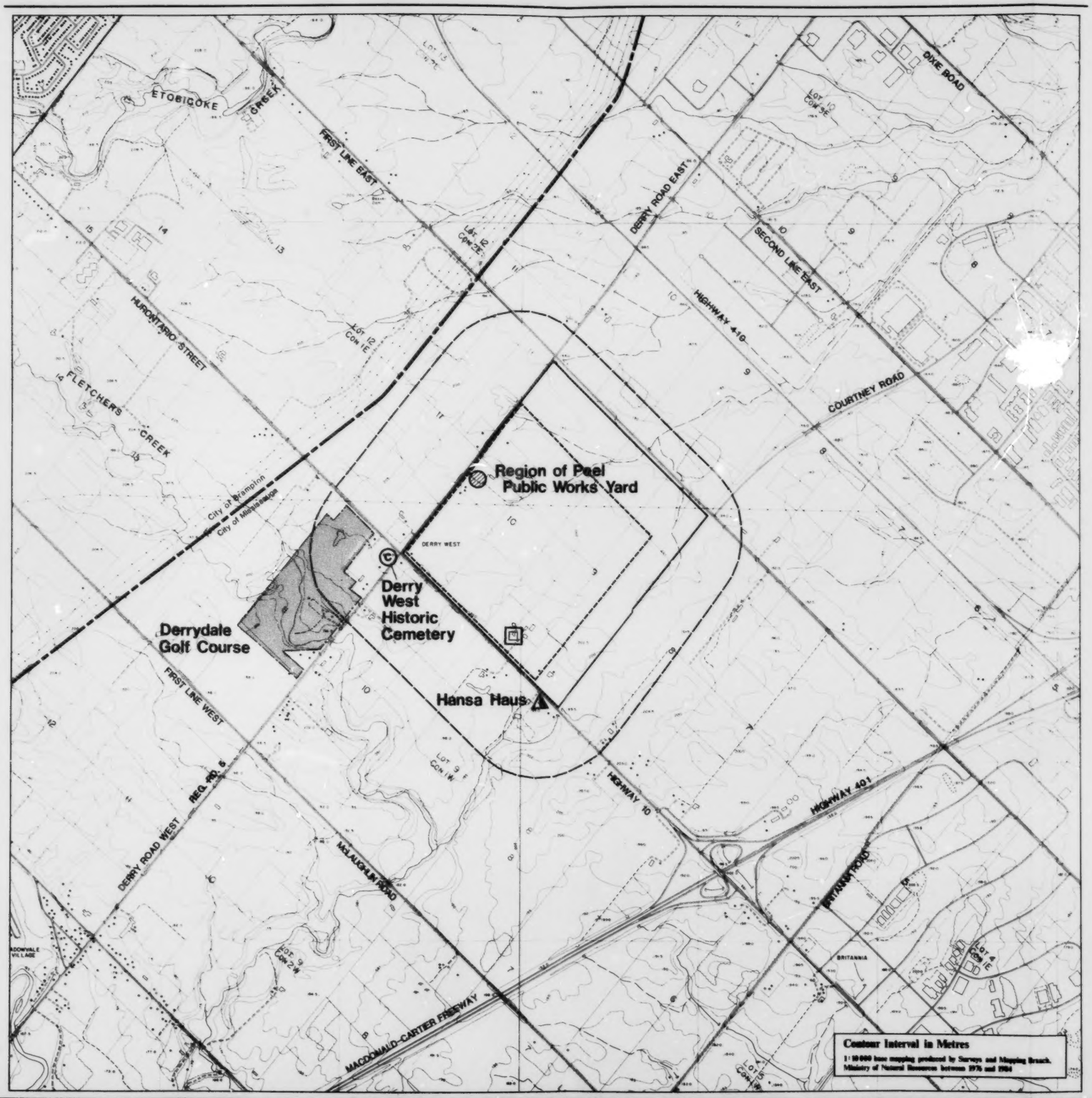
Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-15**



OWMC Ontario Waste Management Corporation

Consultant:

ier Institute of Environmental Research Inc.

Legend:

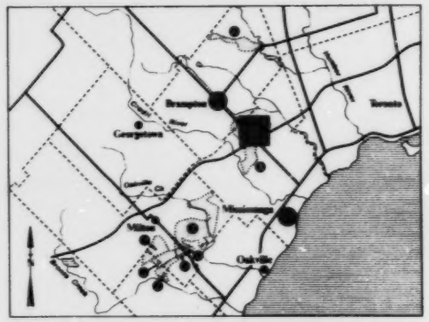
- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm

LIMIT OF LANDFILL approx. — not to scale

MAXIMUM POTENTIAL ACQUISITION BOUNDARY — 500 metres

Key Map: **LF-2 North**

Lots 9 and 10; Concession I EHS (East of Hurontario Street), City of Mississauga



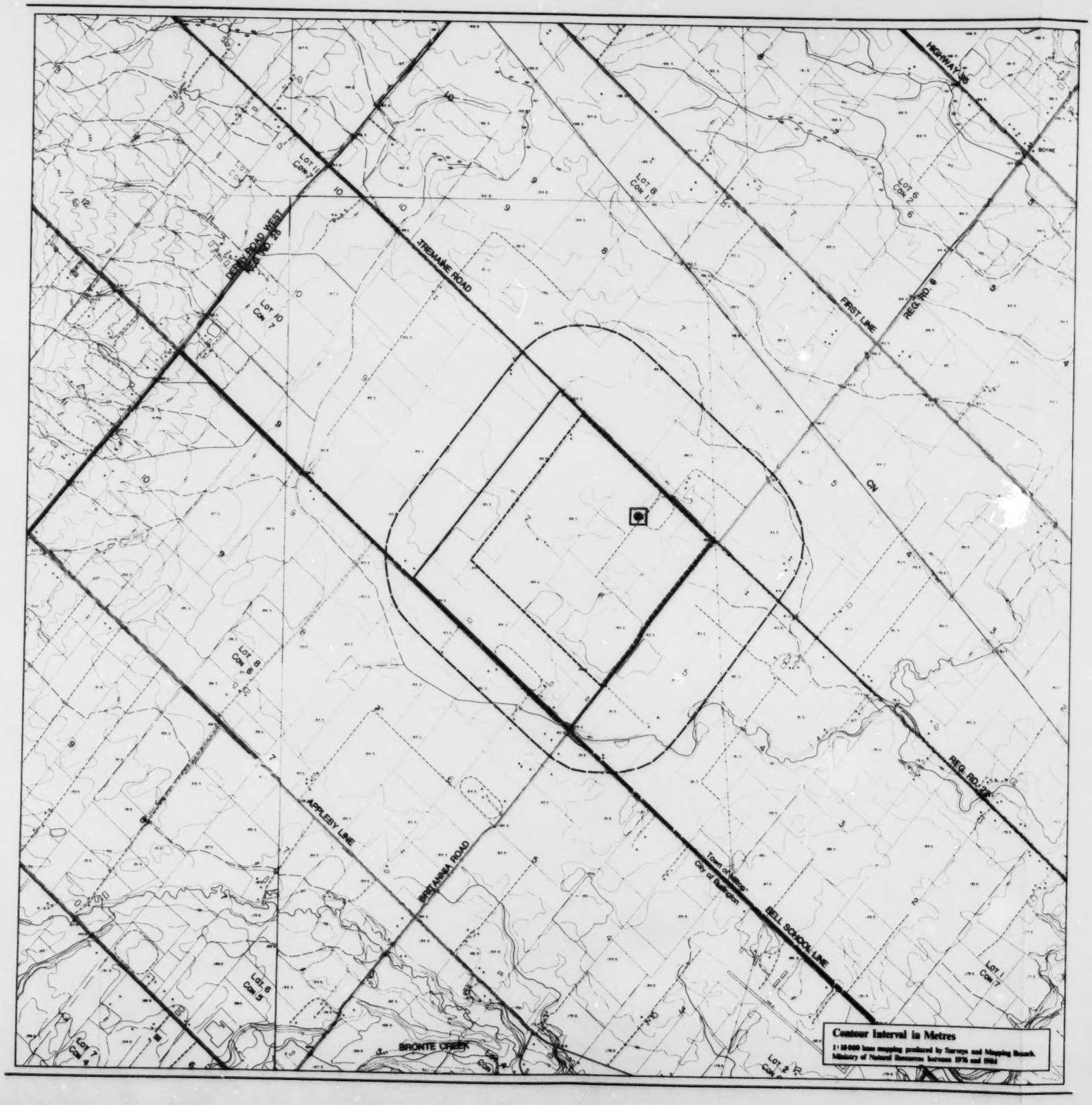
Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-16**



OWMC Ontario Waste Management Corporation

Consultant:

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Institute of Environmental Research Inc.

Legend:

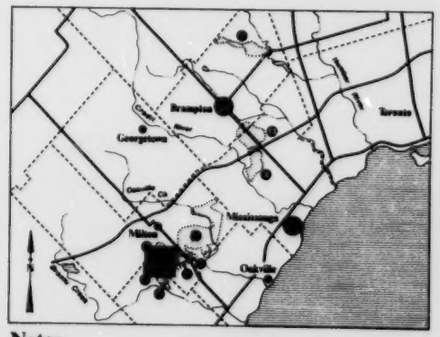
- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm

LIMITS OF LANDFILL approx. not to scale

MAXIMUM POTENTIAL ACQUISITION BOUNDARY
500 m STUDY AREA

Key Map: **LF-4 North**

Lots 6 and 7; Concession VII; Town of Milton, formerly in the Township of Nelson



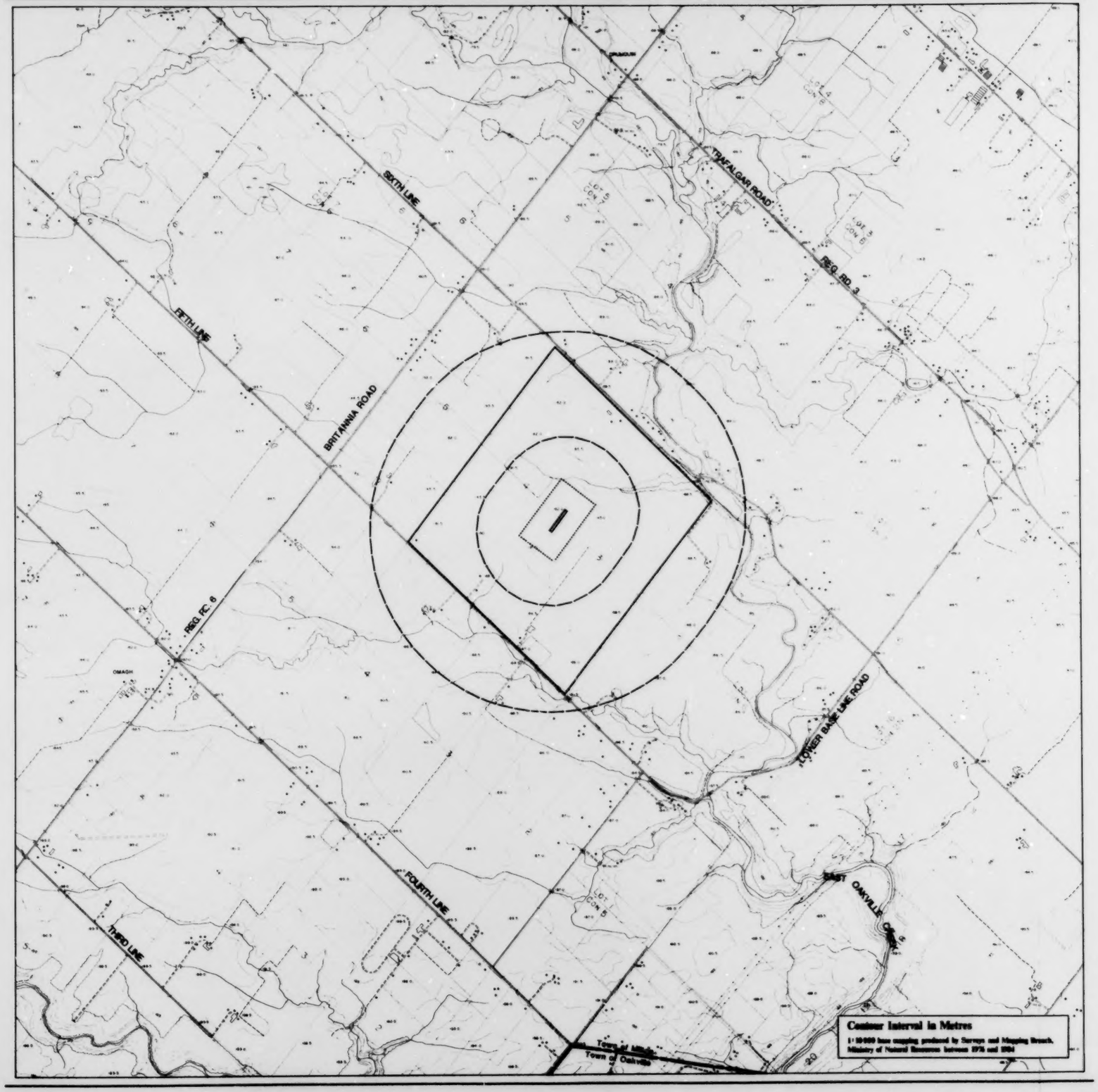
Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-17**



OWMC Ontario Waste Management Corporation

Consultant:

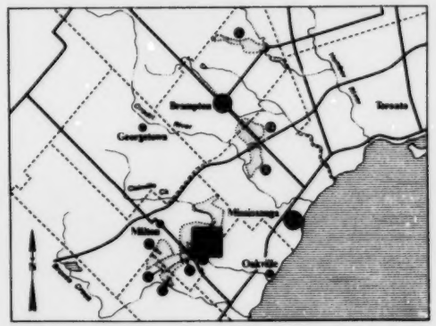
ier Institute of Environmental Research Inc.

Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm

Key Map: **PI-13 North**

Lots 3 and 4; Concession VI; Town of Milton, formerly the Township of Trafalgar



Notes:

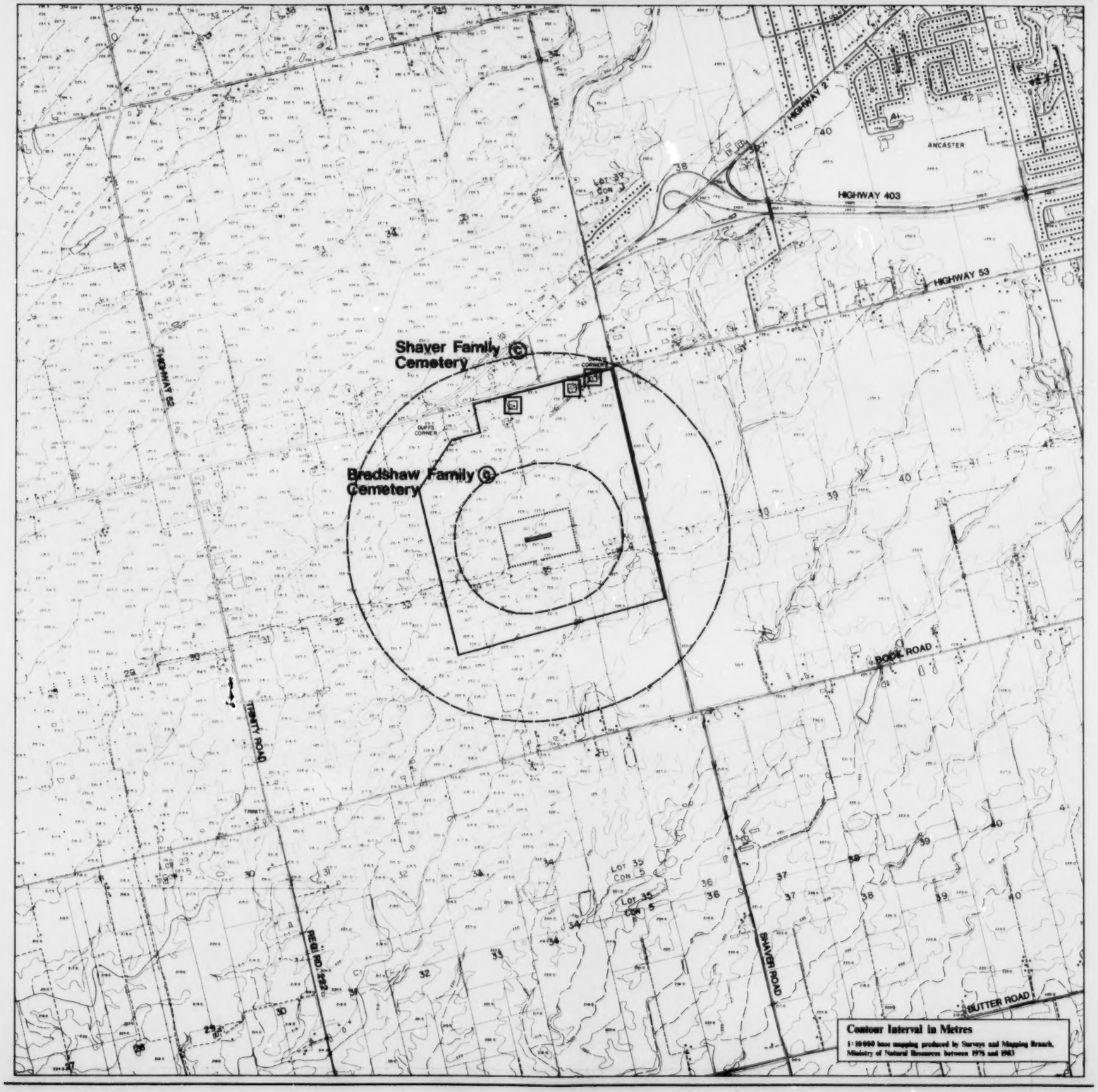
Only those features identified at least once on any site or study area are indicated in the legend.

No features are identified on this site and study area.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-18**



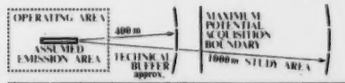
OWMC Ontario Waste Management Corporation

Consultant:

ier Institute of Environmental Research Inc.

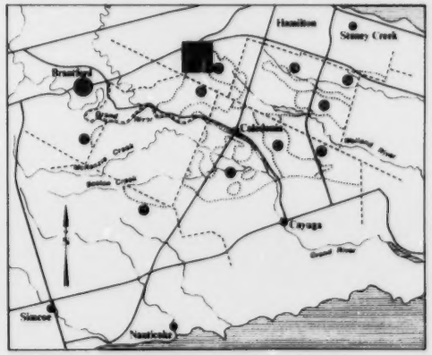
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **PI-2 West**

Part of Lots 34, 35 and 36; Concession IV; Town of Ancaster



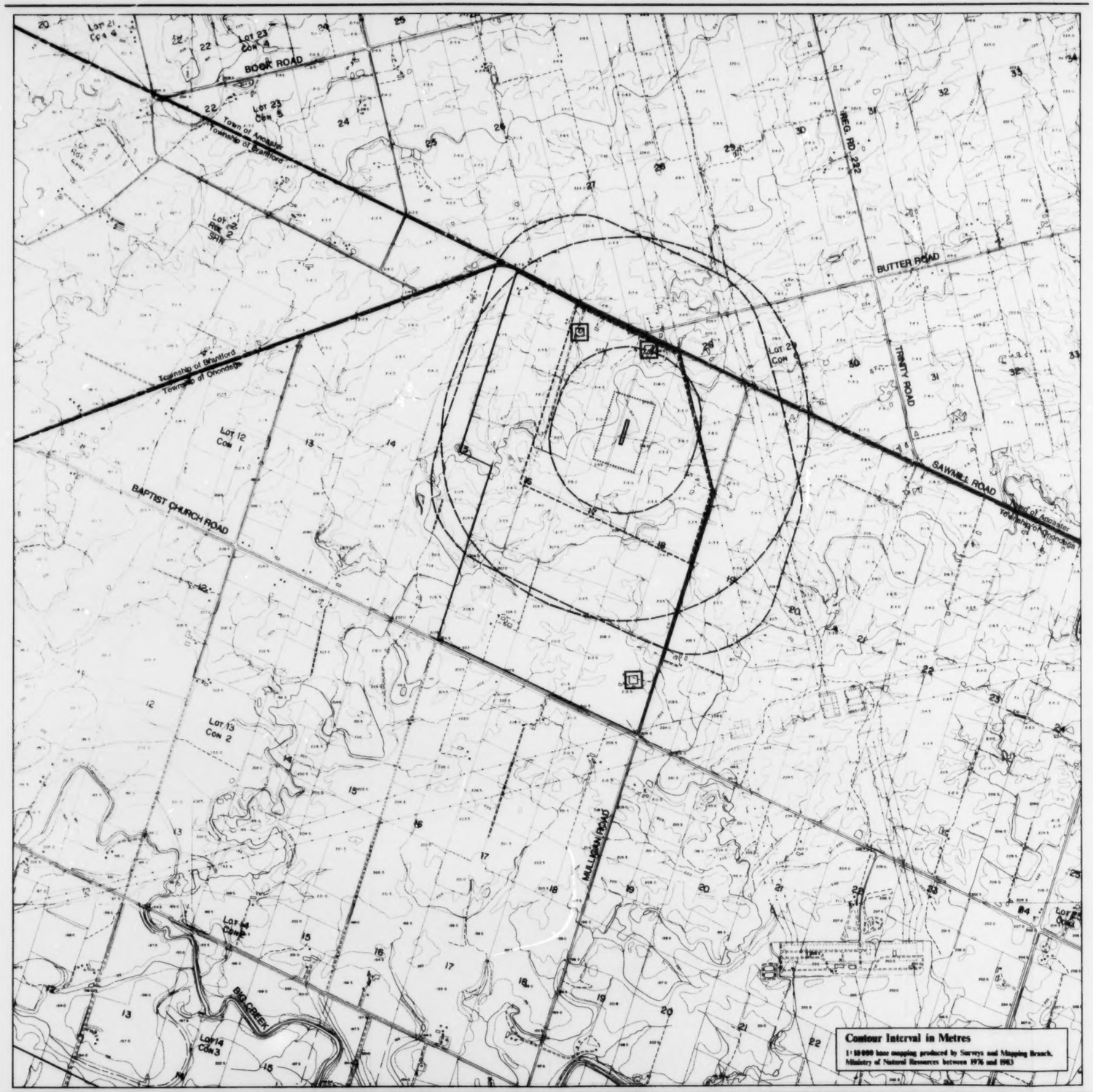
Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-19**



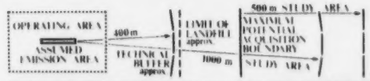
OWMC Ontario Waste Management Corporation

Consultant:

ier Institute of Environmental Research Inc.

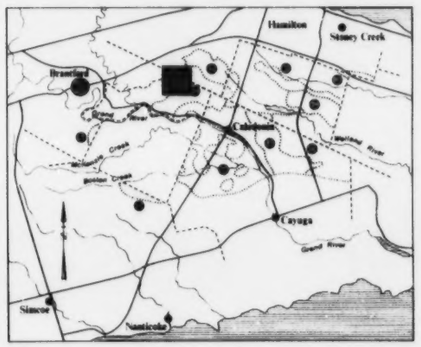
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **LF-10a West**

Lots 16, 17 and Part of Lots 15 and 18; Concession I; Township of Onondaga



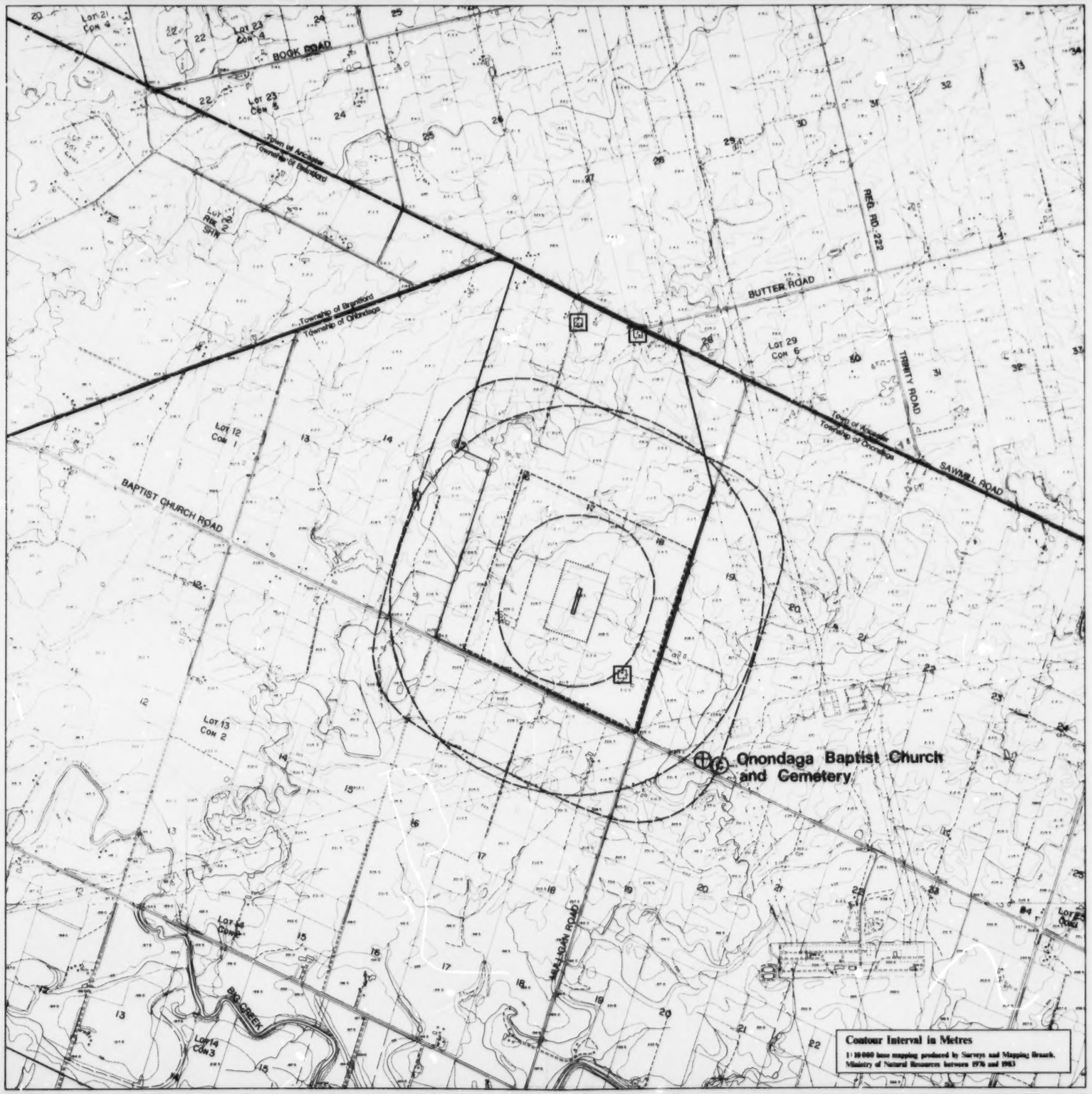
Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-20**



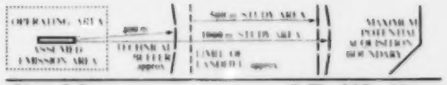
OWMC Ontario Waste Management Corporation

Consultant:

ier Institute of Environmental Research Inc.

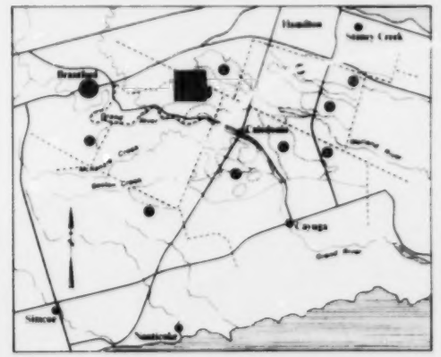
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **LF-10b West**

Lots 16, 17 and Part of Lots 15 and 18; Concession I: Township of Onondaga



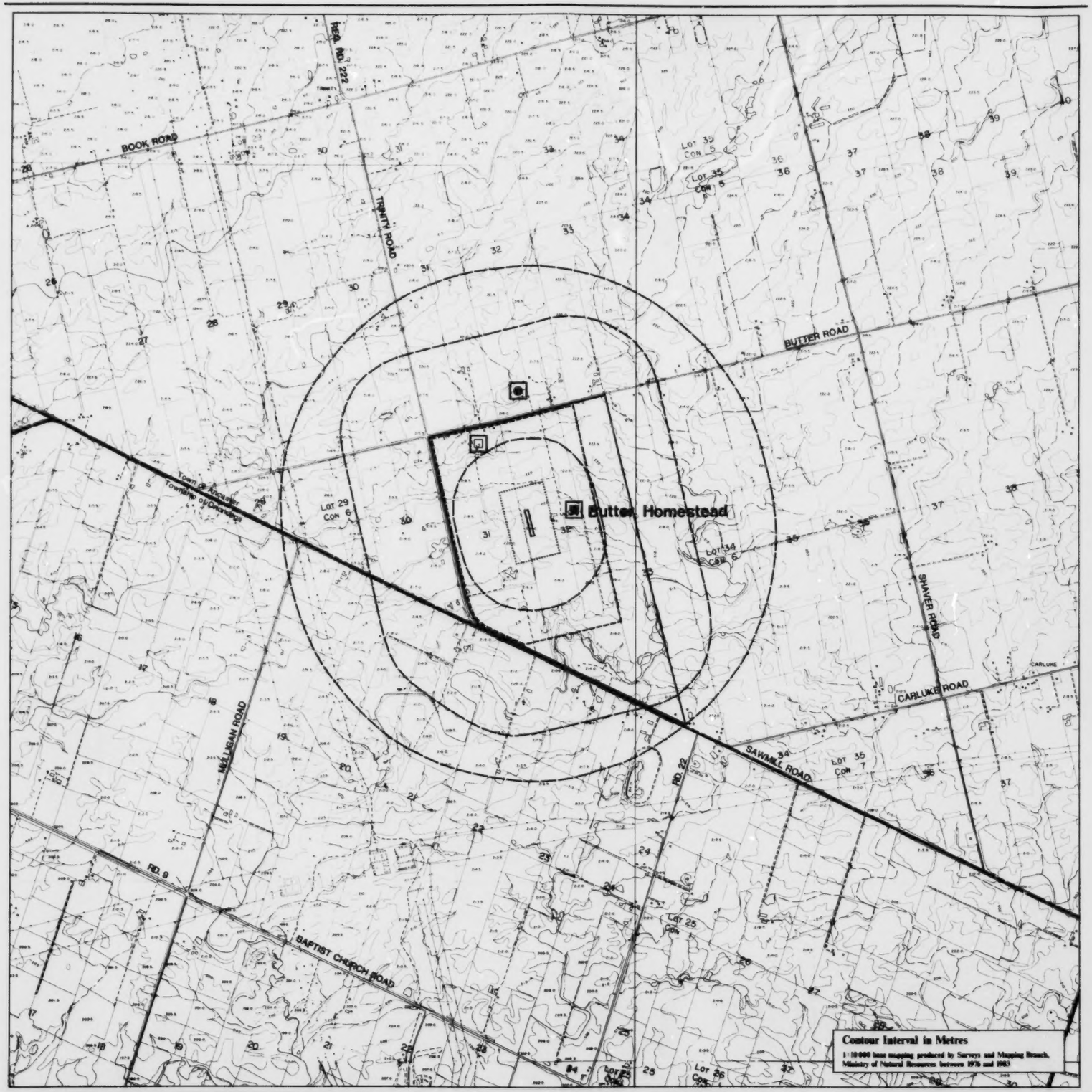
Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-21**



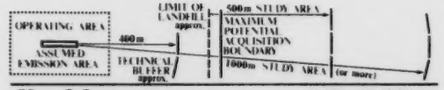
OWMC Ontario Waste Management Corporation

Consultant:

ier Institute of Environmental Research Inc.

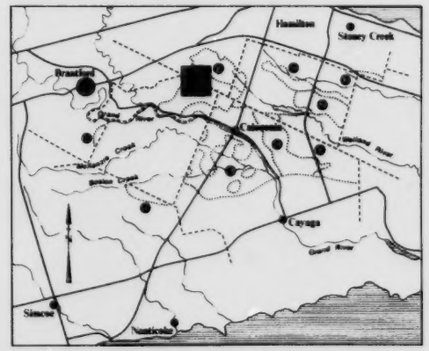
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **LF-11 West**

Lots 31, 32 and Part of Lot 33, Concession VI; Town of Ancaster



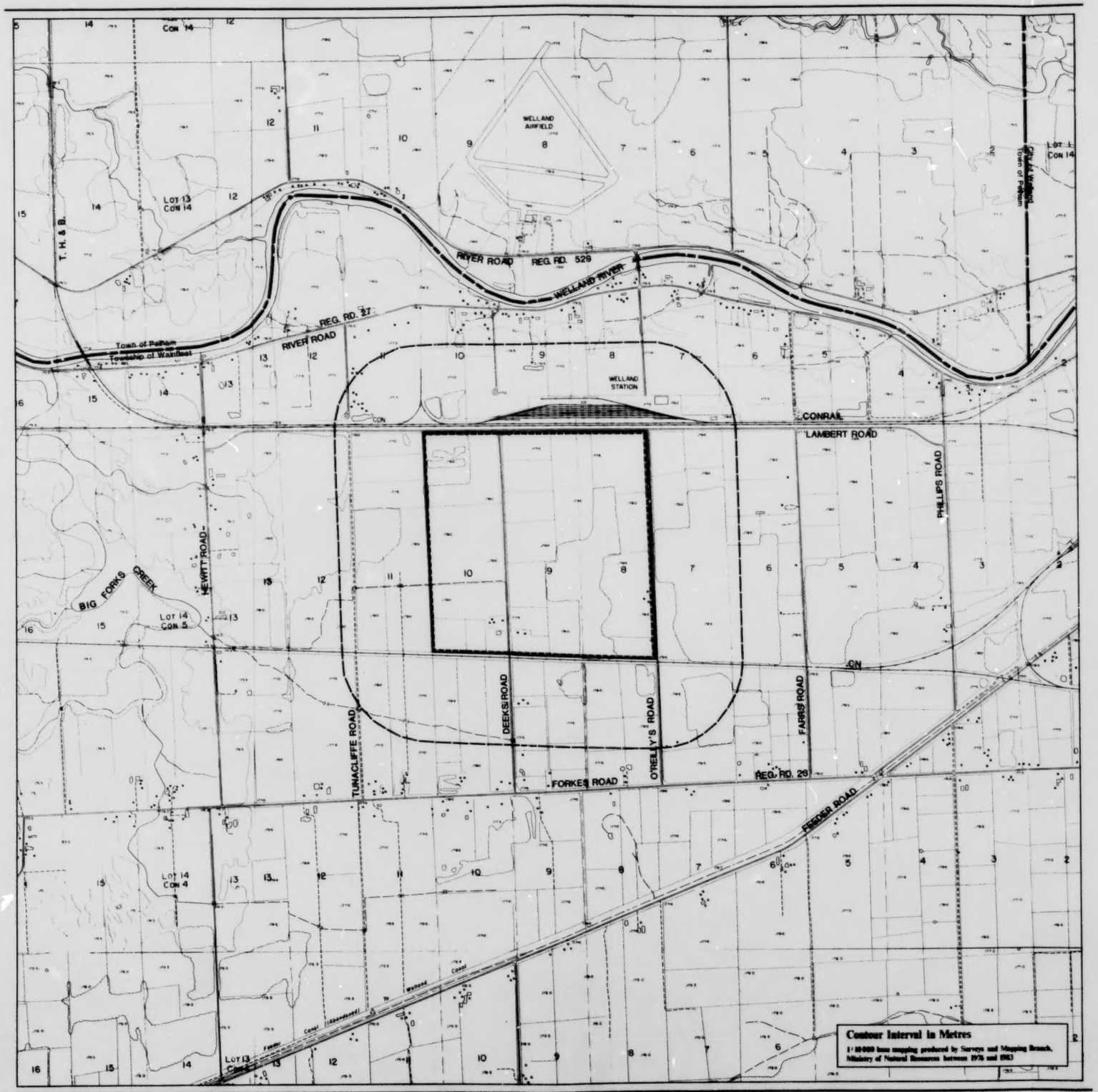
Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-22**



OWMC Ontario Waste Management Corporation

Consultant:

ier
Institute of Environmental Research Inc.

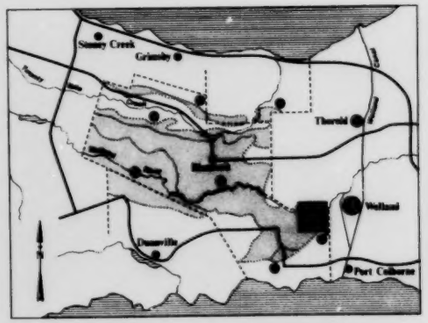
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm

LIMIT OF LANDFILL approx. — not to scale — MAXIMUM POTENTIAL ACQUISITION BOUNDARY — 500 m STUDY AREA

Key Map: **LF-1 Central**

Part of Lots 8, 9, and 10; Concession V; Township of Wainfleet



Notes:

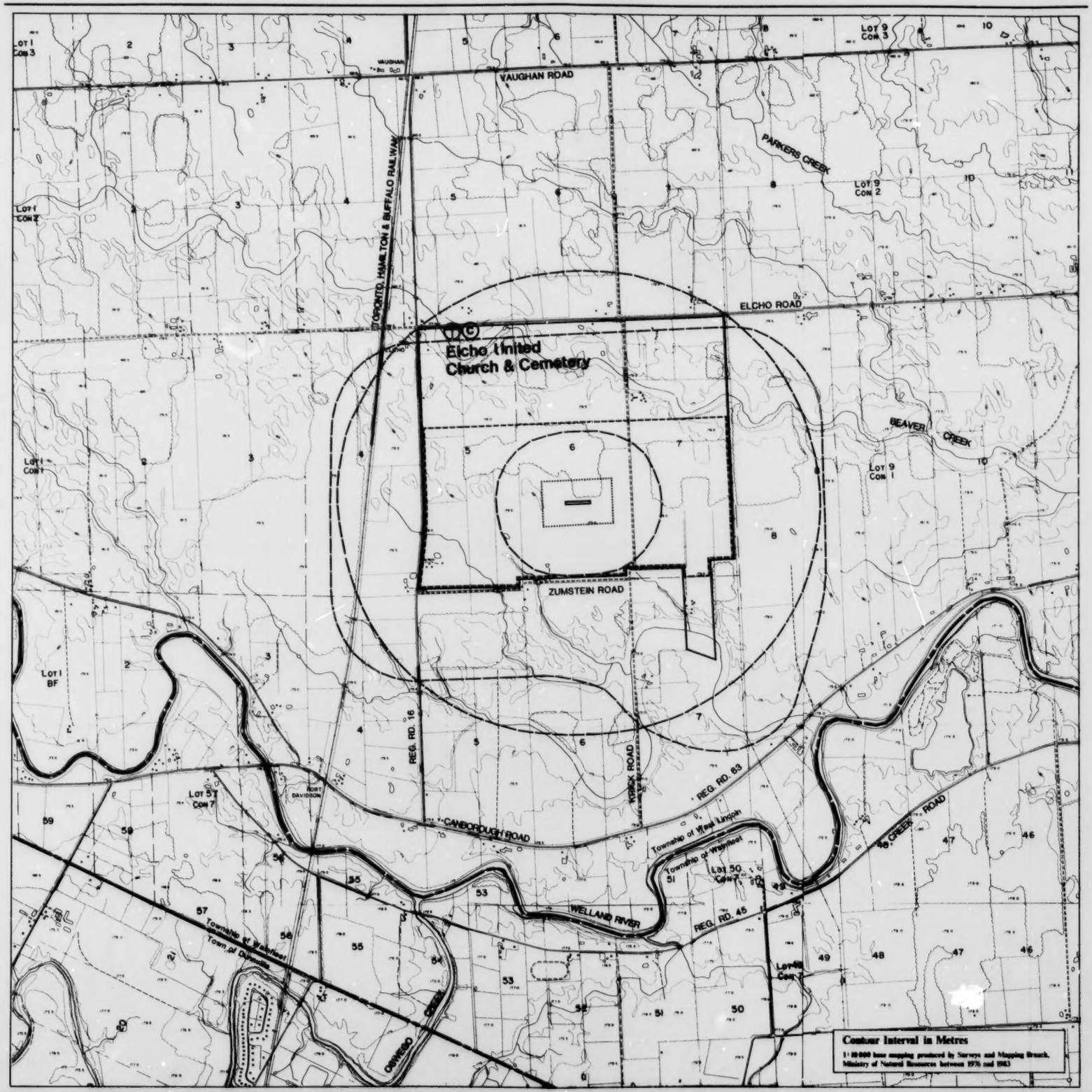
Only those features identified at least once on any site or study area are indicated in the legend.

No features are identified on this site and study area.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-23**



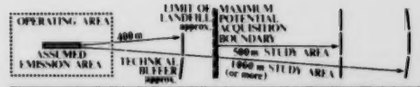
OWMC Ontario Waste Management Corporation

Consultant:

ier
Institute of Environmental Research Inc.

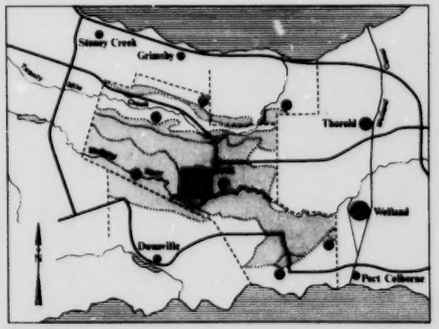
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **LF-3 Central**

Lots 5, 6 and 7; Concession 1; Part of Lot 7; Broken Front Concession; Township of West Lincoln; formerly in the Township of Gainsborough



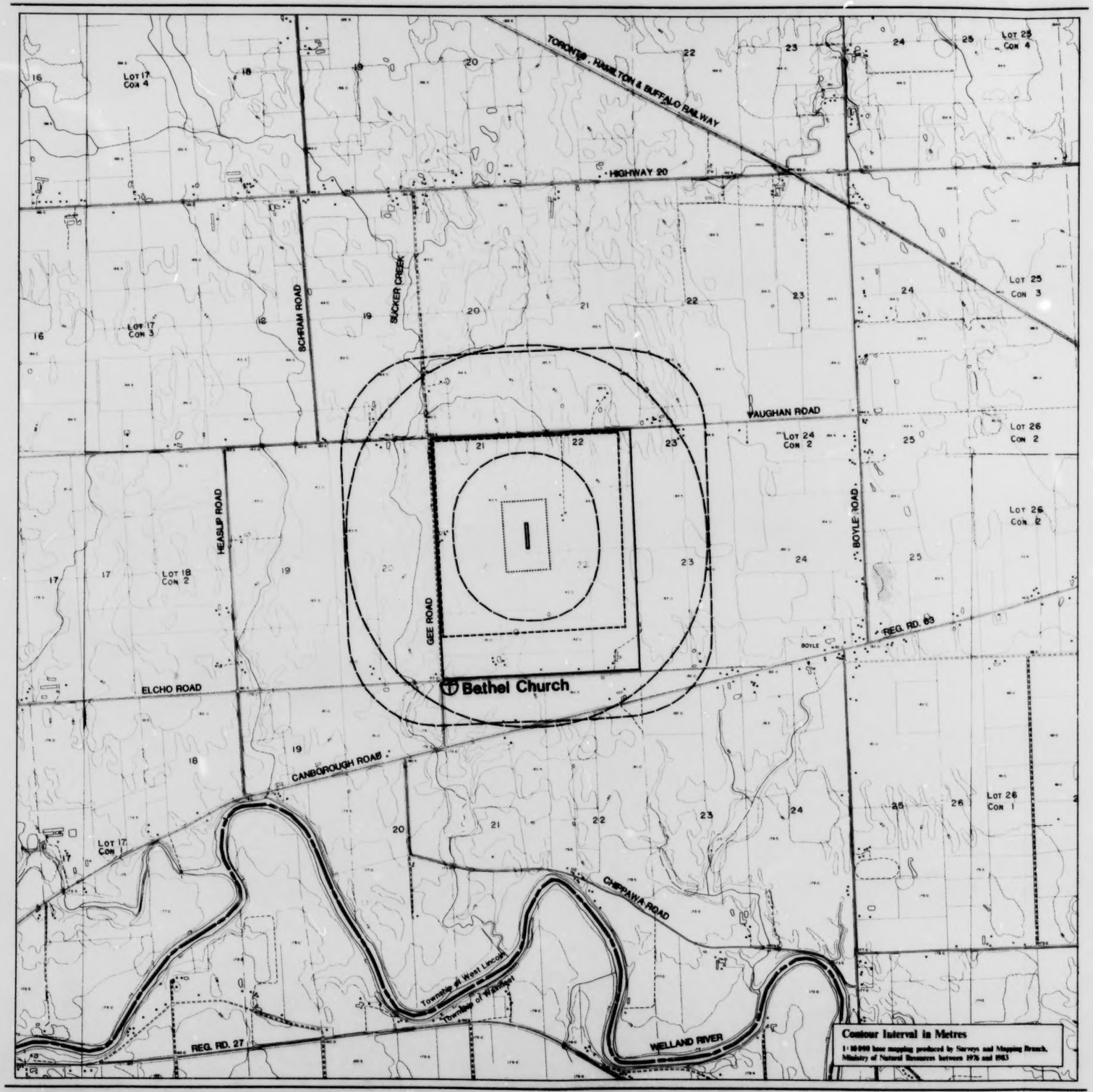
Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-24**



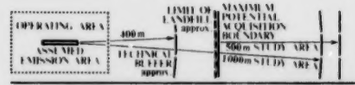
OWMC Ontario Waste Management Corporation

Consultant:

ier Institute of Environmental Research Inc.

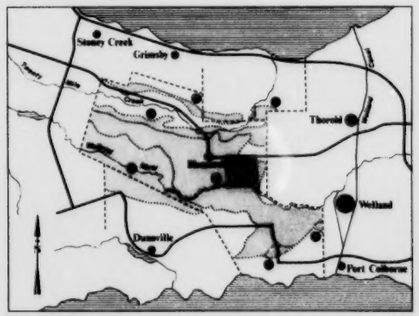
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **LF-8 Central**

Lots 21 and 22; Concession II; Township of West Lincoln; formerly in the Township of Gainsborough



Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-25**

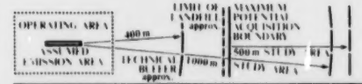
OWMC Ontario Waste Management Corporation

Consultant:

ier Institute of Environmental Research Inc.

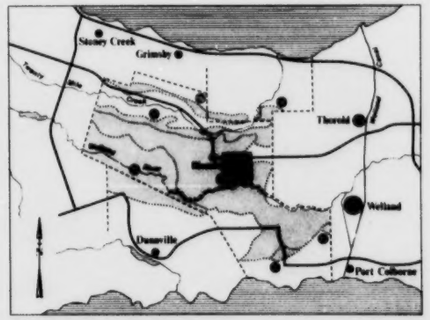
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **LF-9 Central**

Lot 18 and Part of Lot 17; Concession III; Township of West Lincoln; formerly in the Township of Gainsborough



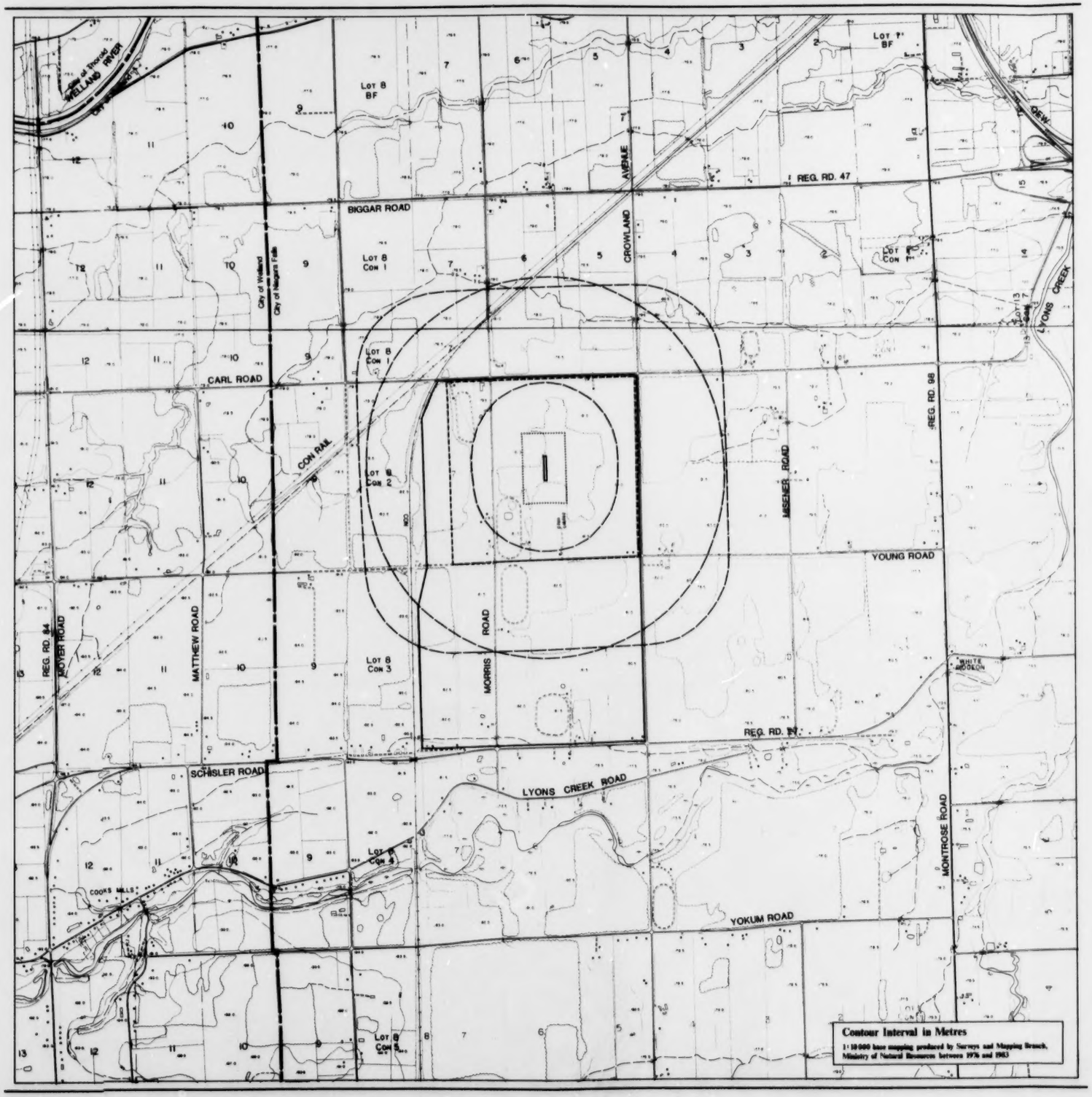
Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-26**



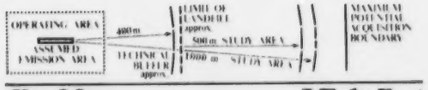
OWMC Ontario Waste Management Corporation

Consultant:

ier
Institute of Environmental Research Inc.

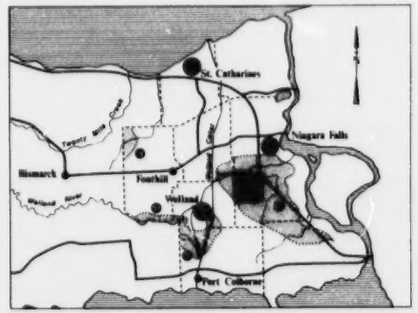
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **LF-1a East**

Lots 5, 6 and 7; Concessions II and III; City of Niagara Falls; formerly in the Township of Crowland



Notes:

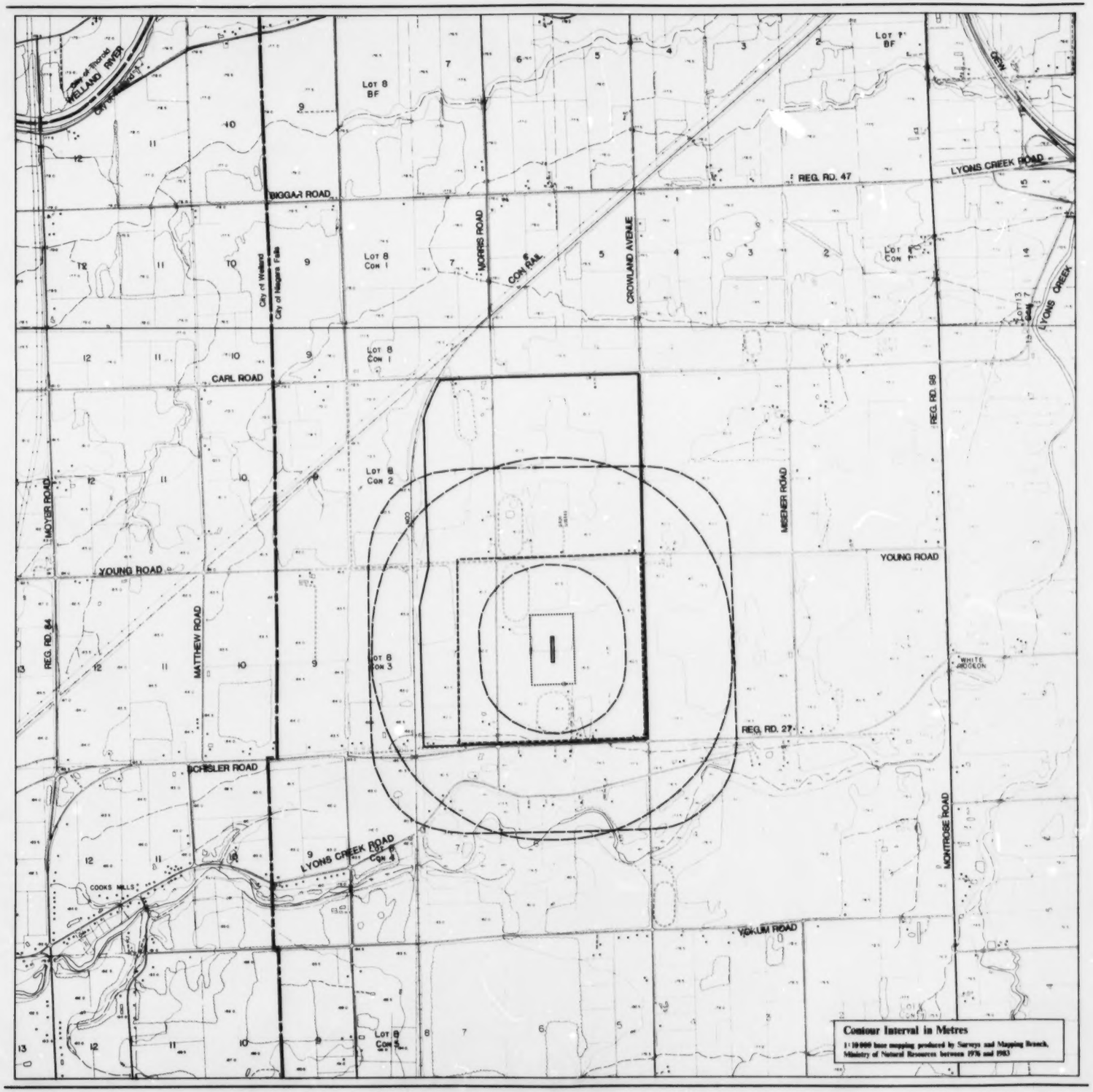
Only those features identified at least once on any site or study area are indicated in the legend.

No features are identified on this site and study area.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-27**



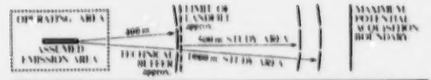
OWMC Ontario Waste Management Corporation

Consultant:

ier Institute of Environmental Research Inc.

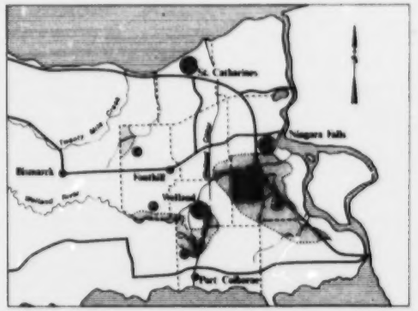
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **LF-1b East**

Lots 5, 6 and 7; Concessions II and III; City of Niagara Falls; formerly in the Township of Crowland



Notes:

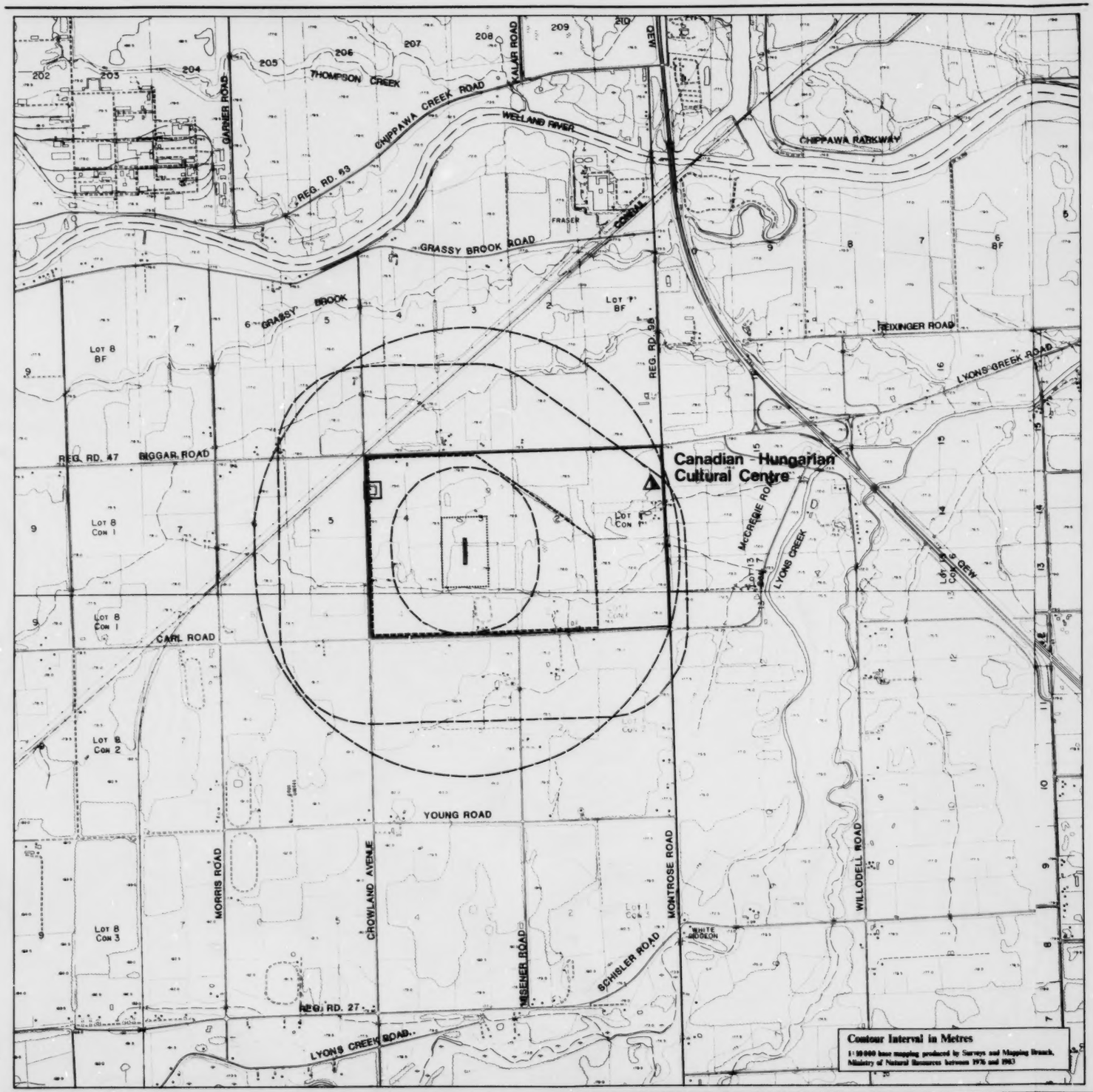
Only those features identified at least once on any site or study area are indicated in the legend.

No features are identified on this site and study area.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-28**



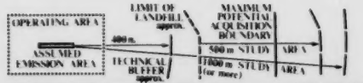
OWMC Ontario Waste Management Corporation

Consultant:

ier Institute of Environmental Research Inc.

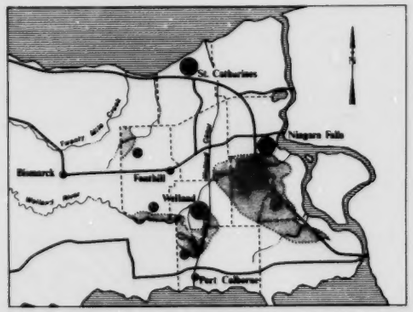
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **LF-3 East**

Lots 1, 2, 3 and 4; Concession I; City of Niagara Falls, formerly Township of Crowland



Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-29**

OWMC Ontario Waste Management Corporation

Consultant:

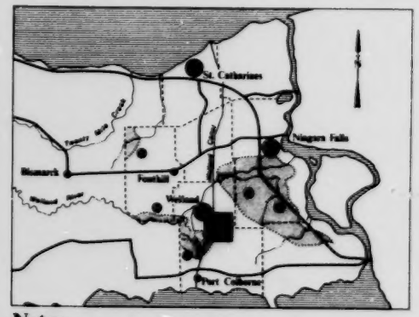
ier Institute of Environmental Research Inc.

Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm

Key Map: **PI-18 East**

Lots 15, 16 and Part of Lot 17; Concession VII; City of Welland, formerly in the Township of Crowland



Notes:

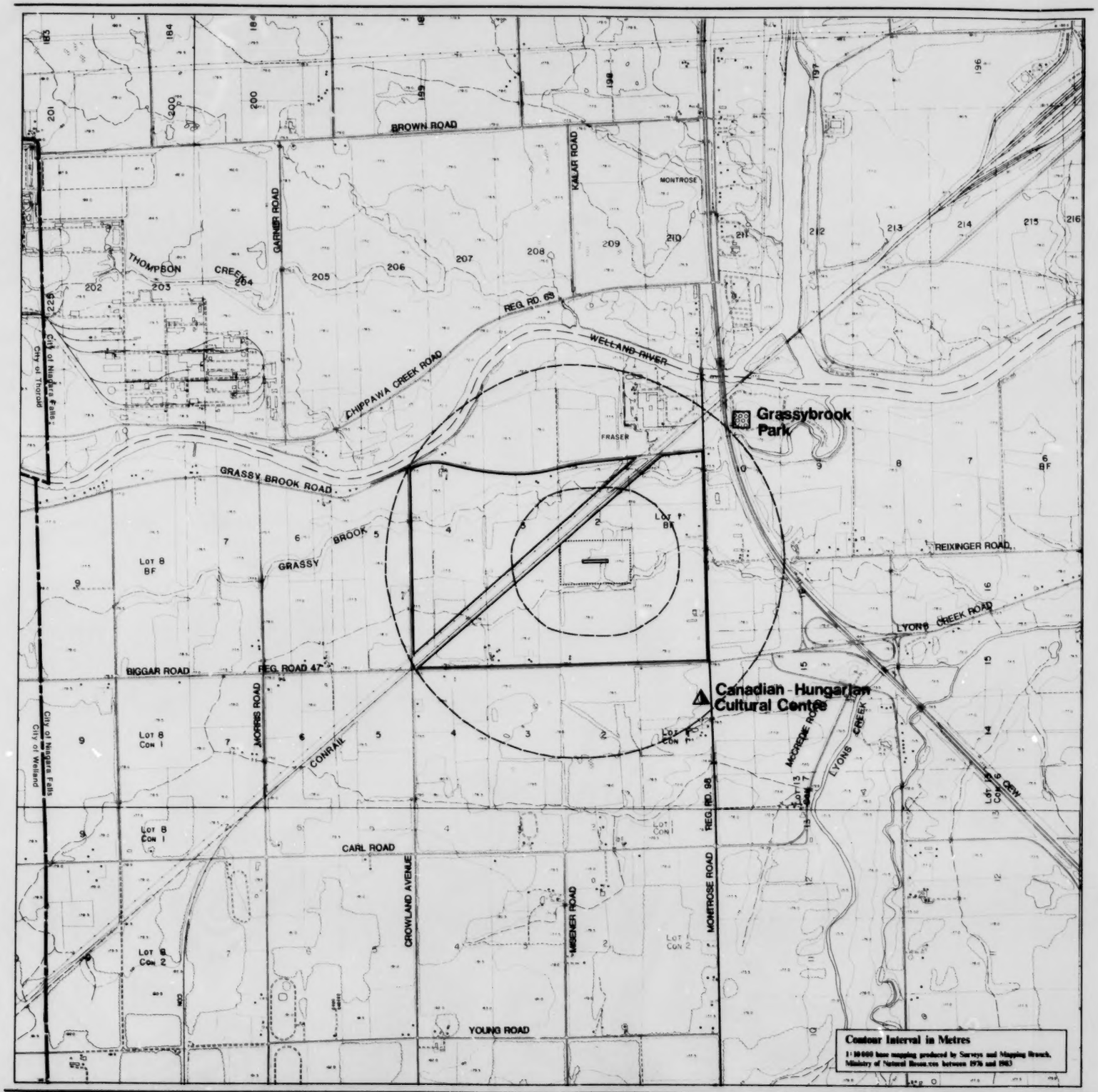
Only those features identified at least once on any site or study area are indicated in the legend.

No features are identified on this site and study area.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP I-30**



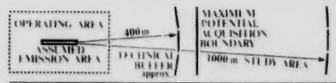
OWMC Ontario Waste Management Corporation

Consultant:

ier
Institute of Environmental Research Inc.

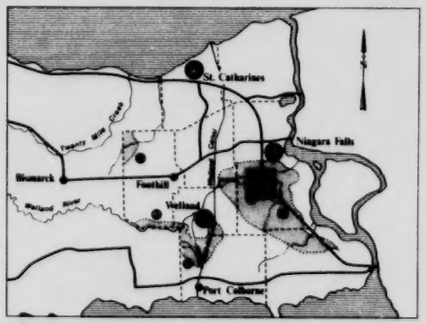
Legend:

- Public building
- Church
- Cemetery
- Municipal park
- Golf course
- Commercial recreation facility
- Cultural centre
- Fairground / Exhibition
- Historic building
- Possible historic building
- Century farm



Key Map: **PI - 27 East**

Part of Lots 1, 2, 3, and 4; Broken Front Concession Welland River; City of Niagara Falls; formerly in the Township of Crowland



Notes:

Only those features identified at least once on any site or study area are indicated in the legend.

1000 feet 0 1000
500 metres 0 500

Community, Recreation and Tourist Features CANDIDATE SITE IDENTIFICATION

October 1984 **MAP 1-31**

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APPENDIX A

Contact Lists

The following are lists of those representatives contacted by phone, letter or interview during Phase 3b. The lists are divided as follows:

- Federal Ministries
- Provincial Ministries
- Conservation Authorities
- Regional Governments
- Municipal Governments
- Boards of Education

FEDERAL MINISTRIES

1. Parks Canada
   Ontario Regional
   Office
   P.O. Box 1359
   132-2nd Street East
   Cornwall, Ontario

   John Bonser, Acting Director.
   August 3, 1983
   Luce Charron, Chief - Natural
   Resource Conservation.
   August 17, 1983
   Bill Stevenson, Resource Management
   Specialist.
   August 23, 1984

PROVINCIAL MINISTRIES

1. Ministry of Citizenship and Culture
77 Bloor St. W., 6th Floor
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Ron Richards, Executive Assistant to the Deputy Minister.
August 4, 1983; August 18, 1983

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77 Bloor St. W., 7th Floor
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John Weiler, Chief, Architecture and Planning.
August 25, 1983
Julie Greer, Technician
September 29, 1983; October 3, 1983

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Larry Ryan, Senior Advisor, Culture Division.
August 19, 1983; August 25, 1983; September 2, 1983

2. Ministry of Education
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900 Bay Street
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(416) 965-2565

T. P. Adams, Assistant Deputy Minister.
August 8, 1983

Ministry of Education
19th Floor, Mowat Block
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Toronto, Ontario
(416) 965-9676

R. Lawton, Chief Architect.
August 8, 1983; August 11,

Ministry of Colleges and Universities
10th Floor, Mowat Block
900 Bay Street
Toronto, Ontario
(416) 965-5851

Eric Shackelton, Senior Capital Coordinator, College Affairs.
August 8, 1983
Bill Baush, Project Manager.
August 24, 1983

	Ministry of Colleges and Universities University Relations Branch 9th Floor, Mowat Block 900 Bay Street Toronto, Ontario (416) 965-6382	Egils Tannis, University Affairs Officer. August 17, 1983
3.	Ministry of Correctional Services 2001 Eglinton Ave. East 3rd Floor Scarborough, Ontario (416) 750-3366	John Pahapill, Manager, Industrial Programs. August 8, 1983
4.	Ministry of Health 15 Overlea Blvd., 5th Floor Toronto, Ontario (416) 963-2238	Dr. Lesbia Smith, Senior Medical Consultant, Disease Control and Epidemiology. August 16, 1983
	7th Floor (416) 965-8174	Ron Quan, Senior Administrative Consultant, Institutional and Operations Branch. August 17, 1983; October 20, 1983; October 24, 1983
5.	Ministry of Tourism and Recreation 1200 Bay Street, 12th Floor Toronto, Ontario (416) 963-2331	Alexandra Semeniuk, Program Analyst, Planning and Administration Division. August 25, 1983; September 28, 1983; September 30, 1983; October 4, 1983
6.	Ministry of Natural Resources 5th Floor, Whitney Block 99 Wellesley Street Toronto, Ontario (416) 965-6371	Don Ross, Strategic Planning Officer, Policy and Planning Secretariat. August 10, 1983
	Room 3352 (416) 965-3981	Doug Driscoll, Coordinator, Research Planner, Ontario Recreation Supply Inventory. August 10, 1983; August 12, 1983

	Room 2345 (416) 965-7885	Chris Goddard, Coordinator Public Involvement, Fisheries Branch. August 10, 1983
	Conservation Authorities and Water Management Branch	Rob Milligan, Policy and Planning, Head Water Basin Planning. July 22, 1983
	Central Region 10670 Yonge Street Richmond Hill, Ontario (416) 884-9203	Gord Rogers, Regional Director. August 23, 1983
	Parks and Recreational Areas Branch 3rd Floor, Whitney Block 99 Wellesley Street W. Toronto, Ontario (416) 965-5160	Norm R. Richards, Director. August 15, 1983
7.	Ministry of Community and Social Services P.O. Box 2112 119 King Street W. Hamilton, Ontario (416) 521-7280	Al Strong, Area Manager, Hamilton/Niagara Office. August 20, 1983 Margaret Strecker, Manager, Community Programs. August 23, 1983
	90 Dundas Street West Mississauga. Ontario (416) 276-7670	Barry Whelan, Area Manager, Peel/Halton Office. August 17, 1983 Katharen Coxon, Program Supervisor. August 23, 1983
8.	Ministry of Consumer and Commercial Relations Cemeteries Branch 8th Floor, 555 Yonge Street Toronto, Ontario (416) 963-0511	D.S. McLaughlin, Chief Cemeteries Officer. October 24, 1983 J.A. Francis, Compliance Officer November 9, 1983

CONSERVATION AUTHORITIES

1. Credit Valley Conservation Authority
   10 Mill Street
   Meadowvale, Ontario
   (416) 451-1615/453-2828

   Heather Doyle, Master Planner.
   October 13, 1983
   Rose Menyes, Manager, Resource Planning.
   July 22, 1983; August 9, 1983
   Brian Czajer, Senior Resource Planner.
   August 9, 1983

2. Grand River Conservation Authority
   400 Clyde Road
   Cambridge, Ontario
   (519) 621-2761

   Scott Irskine, Planner.
   October 17, 1983
   Dr. A.F. Smith, Coordinator of Grand River Basin Water Management.
   July 22, 1983; August 10, 1983
   Barbara Veale, Research Planner.
   August 10, 1983
   Wayne MacMillan, Environmental Planner.
   August 10, 1983
   Henry List, Planning Technician.
   October 19, 1983
   Brian L. Hunt, Lands and Recreation Planner.
   August 15, 1983
   G.M. Coutts, General Manager.

3. Halton Region Conservation Authority
   310 Main Street
   Milton, Ontario
   (416) 878-4131

   Murray Stephen, General Manager.
   July 22, 1983; August 3, 1983
   Bob Edmundson, Assistant General Manager.
   August 3, 1983

4. Hamilton Region Conservation Authority
   Box 7099, 838 Mineral Springs Rd.
   Ancaster, Ontario
   (416) 525-2181 or
   (416) 648-4427

   John Coates, Assistant General Manager.
   August 10, 1983
   Bob Christian, Planning Supervisor.
   July 22, 1983

5. Long Point Region Conservation Authority
   Box 525
   Simcoe, Ontario
   (519) 426-4623

   Jim Oliver, General Manager
   July 22, 1983

6. Metropolitan Toronto and Region Conservation Authority
   5 Shoreham Drive
   Downsview, Ontario
   (416) 661-6610

   Allyson Deans, Planning Coordinator.
   July 22, 1983; August 8, 1983

7. Niagara Peninsula Conservation Authority
   Highway 20 and Centre Street
   Allanburg, Box 460
   Fonthill, Ontario
   (416) 227-1013

   Marg Miller, Conservation Services Technician.
   October 4, 1983
   Marie Poirier, Planner
   August 12, 1983; October 4, 1983
   Craig Leuty, Former Director of Operations.
   July 22, 1983
   Barbara Guyatt, Resources Planner

OTHER AGENCIES

1. Niagara Parks Commission
   Portage Road and Fraser Hill Road
   Box 150
   Niagara Falls, Ontario
   (416) 356-2241

   George Bailey, Director of Public Relations and Advertising.
   October 3, 1983

2. Niagara Regional Tourist Council
   150 Berryman Avenue, Box 3025
   St. Catharines, Ontario
   (416) 685-7571

   Betsy Derose, Executive Director.
   July 27, 1983

REGIONAL GOVERNMENTS

1. Niagara Region
   Box 3025
   150 Berryman Avenue
   St. Catharines, Ontario
   (416) 685-1571

   Corwin Cambray, Manager,
   Policy Planning.
   January 4, 1984

2. Region of Haldimand-Norfolk
   Box 2002, Munsee and Echo Streets
   Cayuga, Ontario
   1-800-265-8074

   John Koopmans, Planner.
   January 4, 1984

MUNICIPAL GOVERNMENTS

1.	City of Niagara Falls Niagara Falls Parks and Recreation Department 7565 Lundy's Lane Niagara Falls, Ontario 356-7521	John MacDonald, Deputy Director. Week of August 15, 1983; October 3, 1983
2.	City of Niagara Falls Planning Department City Hall 4310 Queen Street Niagara Falls, Ontario 356-7521	Ann Sachar, Planner. October 3, 1983
3.	Town of Fort Erie 200 Jarvis Street Fort Erie, Ontario 871-1600	Emil McIlvenna, Director of Parks and Recreation. Week of August 15, 1983; September 7, 1983; October 5, 1983
4.	City of Welland Parks Department 99 Federal Road Welland, Ontario 732-5331	Wesley Ogden, Director of Recreation (for recreational facilities). Week of August 15, 1983; October 12, 1983 Jack Price, General Foreman, Parks, Week of August 15, 1983 Dan Ryan, Superintendent, Parks. October 12, 1983
5.	City of Port Colborne 239 King Street 2nd Floor Port Colborne, Ontario 835-2900	Art Stead, Director of Parks and Recreation. Week of August 15, 1983; October 12, 1983
6.	City of Thorold Box 1044 8 Carleton Street South Thorold, Ontario 227-6613	Ken Todd, Deputy Clerk. Week of August 15, 1983; September 30, 1983; October 3, 1983; October 4, 1983; January 4, 1983
7.	Township of Wainfleet 19M43 Highway #3 Wainfleet, Ontario 899-3463	Carla Lametti, Planning Director. Week of August 15, 1983; October 11, 1983 Bob Heil, Clerk/Treasurer. September 7, 1983; October 11, 1983
8.	Town of Grimsby Box 159 160 Livingstone Avenue Grimsby, Ontario 945-9634	Emillio Iovio, Planning Director. February 3, 1984

9.	Township of West Lincoln 318 Canboro Street Smithville, Ontario 957-3346	Rob Mens, Treasurer. Week of August 15, 1983; September 6, 1983; September 9, 1983; October 11, 1983
10.	Town of Pelham 20 Pelham Town Square Fonthill, Ontario 892-2607	Sam Derreck (Former Director of Recreation.) Week of August 15, 1983 From Oct. 1/83: Murray Hackett, Clerk. October 4, 1983; January 18, 1984
11.	Town of Lincoln 206 King Street West Beamsville, Ontario 563-8205	Kathy Adam, Public Works Department. Week of August 15, 1983; October 6, 1983
12.	Township of Glanbrook 3027 Homestead Drive Mt. Hope, Ontario 679-4121/692-3910	Craig Switzer, Clerk/Treasurer. Week of August 15, 1983; October 13, 1983 Coleen McFee, Recreation Department. September 7, 1983
13.	Town of Stoney Creek 777 Highway #8 Fruitland (2nd Floor) Ontario 643-1261	Brian Shymal, Director, Parks and Recreation. September 6, 1983; October 11, 1983
14.	Town of Ancaster 300 Wilson Street East Ancaster, Ontario 648-4401	Paul Harrison, Director. August 15, 1983 Peter Tollefsen, Planner. October 13, 1983; January 4, 1984
15.	City of Nanticoke 230 Main Street Port Dover, Ontario (519) 583-0890	Ken Campbell, Director of Recreation. Week of August 15, 1983 Kathy Balkam, Clerk's Department. October 11, 1983
16.	Town of Haldimand Corner of Munsee and Echo Cayuga, Ontario 772-3324	G. Shipway, Director of Recreation. Week of August 15, 1983; October 11, 1983 Marg Hoover, Recreation Department. Week of August 15, 1983
17.	Town of Dunville 210 Main Street East Dunnville, Ontario 774-7251	Joanne Lehan, Recreation Programs Coordinator. Week of August 15, 1983 John Forestell, Director of Parks and Recreation. August 31, 1983; October 11, 1983

18.	Township of Brantford 73 Charlotte Street Brantford, Ontario (519) 756-7470	D. A. Kelman, Administrator/ Clerk August 15, 1983 Martin Brinkman, Zoning Adminstrator. October 12, 1983
19.	Town of Milton 251 Main Street East Milton, Ontario (basement) 878-7211	L. Arbic, Director, Parks and Recreation Department. Week of August 15, 1983; October 11, 1983 Paul Stover, Assistant Director, Parks and Recreation Department. August 15, 1983; August 25, 1983; September 2, 1983 Robin Kitchen, Planner. October 11, 1983
20.	Town of Oakville 1225 Trafalger Road Oakville, Ontario 845-6601	Colin Hood, Assistant Recreation Director. October 7, 1983 P. Murphy, Chief Planner Week of August 15, 1983; October 7, 1983
21.	City of Burlington 426 Brant Street Burlington, Ontario 335-7777	Ross Stephen, Landscape Architect, Recreation Department. August 4, 1983; August 15, 1983; October 7, 1983
22.	City of Brampton 150 Central Park Drive Brampton, Ontario 793-4110	Bob Reid, Parks and Recreation Director. October 13, 1983 John Marshall, Planning Director. Week of August 15, 1983; October 12, 1983
23.	City of Mississauga	Frances Turner (Former Open Space Planning Technician, Recreation and Parks Department) August 17, 1983; August 23, 1983 From October 11/83: Donna Pounder, Open Space Planner, Recreation and Parks Department. October 20, 1983 Dirk Blyleven, Principal Planner, Development Control. October 13, 1983 Evelyn Schabauer, Open Space Planner, Recreation and Parks Department. October 14, 1983 Julius Gorys, Long Range Planning and Research.
24.	Township of Onondaga R.R. #7 Brantford, Ontario (519) 759-8572	George Mitchell, Clerk/Treasurer. Week of August 15, 1983; October 12, 1983.

BOARDS OF EDUCATION

1.	Peel Board of Education 73 King Street West Mississauga, Ontario 1-279-6010	J. L. Berges, Superintendent of Planning and Resources. Week of August 15, 1983 John Greeniaus, Chief Planning Officer. October 14, 1983 Barb Gates, Business Officer (Mississauga). October 25, 1983 Sally Perreira, Office Manager (Brampton). October 25, 1983
2.	Dufferin-Peel Roman Catholic Separate School Board 100 Dundas Street West Mississauga, Ontario 1-270-4630	Bill Waite, Planner. Week of August 15, 1983 Frank Golle, Planner. October 21, 1983
3.	Wentworth County Board of Education 357 Wilson Street East Ancaster, Ontario 1-523-8621	R. McElroy, Superintendent of Plant. September 8, 1983 Burkley Harper, Transportation and Planning August 16, 1983; August 30, 1983 Al Greenleaf, Director of Education. September 14, 1983
4.	Haldimand Board of Education Munsee Street Cayuga, Ontario 1-519-3391	Jake Fransen, Director of Education. Week of August 15, 1983; October 18, 1983
5.	Lincoln County Board of Education 112 Oakdale Avenue St. Catharines, Ontario 1-685-1551	Bob Crawford, Supervisor, Planning and Transportation. Week of August 15, 1983; October 6, 1983
6.	Lincoln County Roman Catholic Separate School Board 80 Grantham St. Catharines, Ontario 1-682-8354	J. P. Skehin, Director of Education. Week of August 15, 1983; October 13, 1983

7.	Niagara South Board of Education Education Centre 250 Thorold Road west Welland, Ontario 1-735-3840	Don W. Jackson, Superintendent, Planning. Week of August 15, 1983; October 12, 1983
8.	Welland County Roman Catholic Separate School Board 300 Fitch Street Welland, Ontario 1-735-0240	Joe A. Dennis, Controller of Plant. September 2, 1983; October 5, 1983
9.	Halton Board of Education 2050 Guelph Line Burlington, Ontario 1-335-3663	Gordon E. Dickson, Manager, Property and Planning. September 6, 1983; September 23, 1983; October 6, 1983
10.	Halton Roman Catholic Separate School Board P.O. Box 308 Burlington, Ontario 1-632-6300	John Birett, Superintendent of Building and Plant Week of August 15, 1983; August 25, 1983 T.P.Brady, Business Administrator. October 6, 1983
11.	Hamilton-Wentworth Roman Catholic Separate School Board 90 Mulberry Street Hamilton, Ontario 1-525-2930	P.J. Brennan, Director of Education. August 15, 1983 Ed Gauch, Planning and Statistical Assistant. October 12, 1983
12.	Brant County Board of Education 349 Erie Avenue Brantford, Ontario 1-519-756-6301	Dr. Glenn Watson, Director of Education. Week of August 15, 1983 Joe Saldarelli, Planner. October 12, 1983; October 14, 1983
13.	Brant County Roman Catholic Separate School Board 1322 Fairview Drive Brantford, Ontario 1-519-756-6369	Dr. John J. Flynn, Director of Education. Week of August 15, 1983 Helen Drozdz, Secretary to Director. October 12, 1983

14.	Haldimand-Norfolk Roman Catholic Separate School Board Regional Road 40 Simcoe, Ontario 1-519-426-8370	L.L. Begley, Director of Education. October 13, 1983 Julian Gertz, Supervisor of Services Week of August 15, 1983
15.	Norfolk Board of Education Box 486 Hill Crest Road Simcoe, Ontario 1-519-426-7750	V.F.Loyst, Superintendent. Week of August 15, 1983; October 19, 1983

APPENDIX B

Factors

PHASE 3 FACTORS - BY STAGE

IDENTIFICATION OF SITE AREAS

- Regional Community Features
- Regional Recreation and Tourist Features

IDENTIFICATION OF POTENTIAL SITES

- Local Community and Recreation Features
- Population Density
- Proximity to Nearest Population Concentration(s)

IDENTIFICATION OF CANDIDATE SITES

Site and Study Area

- Community and Recreation Features
- Estimated Population
- Population Concentrations
- Community Character

Access Routes

- Community and Recreation Features
- Estimated Population
- Population Concentrations

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF SITE AREAS

FACTOR GROUPING: Socio-Economic Characteristics

FACTOR: Regional Community Features

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

1) Health Facility - hospital, nursing home, home for the aged, institution for the disabled, mental institution
2) Regional shopping centre
3) Public building - regional police headquarters, federal, provincial and regional government office, court house
4) Correctional facility - correctional centre, reformatory, training centre, detention centre
5) School - elementary and secondary school
6) Special education facility
7) Post secondary school - community college and university, trade and vocational school

Known planned and proposed features were also considered.

RATIONALE/SIGNIFICANCE:

Such uses generally conflict with landfill/waste treatment facilities because of the presence of large temporary populations and often incapacitated (or partially incapacitated) populations which are hard to evacuate or to provide with emergency services. Such features might also suffer losses in use and enjoyment due to potential nuisance created by the normal operations of OWMC's facilities. These features are also major regional serving facilities whose special siting requirements would make relocation difficult.

SOURCES OF INFORMATION:

Information was obtained from secondary sources, such as government maps and reports and agency interviews for data collection/verification. The agency contact list is provided in Appendix A. For secondary sources, see the Bibliography.

INTERPRETATION/METHODOLOGY:

Data were compiled from telephone, postal, and in-person interviews as well as review of agency/municipal maps and documents, including existing land use maps, where available, and staff notes from meetings. Data were used to construct maps showing the locations of the features.

CRITERIA/INDICATORS:

The features were noted on the maps using a legend of symbols. Only the existence of the features was mapped; characteristics such as size or intensity of use had no bearing on the way in which these features are shown. The maps are provided in OWMC, Site Selection Process, Phase 3b: Selection of Candidate Sites. Technical Data Map Portfolio, 1984. As a supplement to each map, there is an index which identifies each feature. The indexes are provided in Appendix E.

COMMENTS/ASSUMPTIONS/LIMITATIONS:

Only information on large and provincially/regionally significant features was gathered at this stage. Information on smaller and local/community features was gathered in subsequent stages of the site selection process. Data on provincially or regionally significant features were gathered from a number of sources, as noted above. In some cases, judgement regarding the level of significance was provided by our information source; in other instances, the judgement was made by IER staff.

Planned community features were considered as existing features, whereas proposed community features (i.e., plans have not been approved) were considered as lower constraints.

The following community features were not identified within the candidate areas, and so did not contribute to the site selection process:

1) Mental Health Institutions
2) Correctional Facilities

Future features noted were limited to those identified by agency representatives, and so cannot be considered a complete listing.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF SITE AREAS

FACTOR GROUPING: Socio-Economic Characteristics

FACTOR: Regional Recreation and Tourist Features

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

Consists of features which are considered unique and/or nationally, regionally or provincially significant and which attract large numbers of temporary populations such as: national park, provincial park, conservation area, regional park, municipal park, private park, game farm, wildlife centre, golf course, commercial recreation facility (tourist attractions), community centre, cultural centre, museum, theme park, fairground and exhibition, stadium, live theatre, campground, public sports facility, private sports facility, historic site.

Known planned and proposed features were also considered.

RATIONALE/SIGNIFICANCE:

These features provide unique and/or significant recreation and tourist opportunities at a national, provincial or regional level. Such uses generally conflict with landfill/waste treatment facilities because siting on such lands would result in a loss of significant/unique recreation and tourist resources (both natural and man-made), and may also result in the loss of important aspects of local economies. Some of these facilities also serve other functions (e.g., educational, historical, cultural, ecological) which could be impacted.

SOURCES OF INFORMATION:

Information was obtained from secondary sources, such as government maps and reports, and agency interviews for data collection verification. The agency contact list is provided in Appendix A. For secondary sources see, the Bibliography.

INTERPRETATION/METHODOLOGY:

Data were compiled from telephone, postal, and in-person interviews as well as review of agency/municipal maps and documents, including existing land use maps, where available, and staff notes from meetings. Data were used to construct maps showing the locations of the features.

CRITERIA/INDICATORS:

The features were noted on the maps using a legend of symbols. Only the existence of the features was mapped, and characteristics such as size or intensity of use have no bearing on the way in which these features are shown. The maps are provided in OWMC, Site Selection Process, Phase 3b: Selection of Candidate Sites. Technical Data Map Portfolio, 1984. As a supplement to each map, there is an index which identifies each feature. The indexes are provided in Appendix E.

COMMENTS/ASSUMPTIONS/LIMITATIONS:

This mapping notes only those features considered to be nationally, regionally or provincially significant. The data were gathered from a number of sources (as noted above) and in some cases, judgement regarding the level of significance was provided by our information source; in other instances, the judgement was made by IER staff. Information on local community and recreation features was gathered in subsequent stages of the site selection process.

Proposed recreation and tourist features (features whose plans have not been approved) were considered as lower constraints. Planned features (features that have been approved) were assessed as existing features.

The cultural and historic features noted in our mapping were limited to areas such as battlefields or regional serving cultural centres. Indian archeological sites and historic dwellings were not mapped.

The following recreation and tourist features were not identified within the candidate areas, and so did not contribute to the site selection process:

1) National Park
2) Provincial Park
3) Game Farm
4) Wildlife Centre
5) Stadium
6) Live Theatre
7) Historic Site

Future features noted were limited to those identified by agency representatives, and cannot be considered a complete listing.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF POTENTIAL SITES

FACTOR GROUPING: Socio-Economic Characteristics

FACTOR: Local Community and Recreation Features

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

Community and recreation features are those providing leisure, cultural, educational, health, commercial, correctional and government services. Features under the jurisdiction of government, private, and commercial agencies were considered. The features included those applied at the site area identification stage as well as local serving community and recreation features. The following locally serving features were considered:

1) shopping centre
2) public building (police and fire station, jail, municipal government office)
3) health clinic
4) library
5) church
6) cemetery
7) park
8) community centre
9) cultural centre
10) public sports facility
11) private sports facility
12) historic site
13) historic building

Known planned and proposed features were also considered.

RATIONALE/SIGNIFICANCE:

These features serve the local population, and/or attract people, and/or provide educational, health/safety, recreation and cultural, commercial or government services. Should any of these features be located on, or in the vicinity of, a site, the development of the site could create social impacts.

SOURCES OF INFORMATION:

See Factors for Site Area Identification: Community Features, and Recreation and Tourist Features; also field investigations.

INTERPRETATION/METHODOLOGY:

Previously gathered data from agency maps, documents and interviews were used to locate existing and proposed features on 1:10,000 maps and identify the positions of features in relation to the site.

Data on the nature and location of each feature were verified, and supplemented through field investigations on and within 400 metres of each site area.

Field investigations served to identify additional features which had not been noted through secondary sources and agency interviews.

CRITERIA/INDICATORS:

The locations of features were mapped. Any features in a category determined to be high constraint in the previous stage, and identified during field investigations, remained so. Features within categories previously considered moderate or low constraints, and local features were assessed individually employing data regarding intensity of use and significance to the community. Location in relation to site area and study area was used in assessing cemeteries and schools. Although schools were noted at the Identification of Site Areas stage (see Factors for Identification of Site Areas), their exact locations could not be determined until field investigations were undertaken.

COMMENTS/ASSUMPTIONS/LIMITATIONS:

The features for which information on intensity of use and significance to the community was unavailable were mapped but not treated as high constraints. These are primarily private and commercial facilities, and features identified through field investigations for which no additional background data were available.

The historic features noted included both those designated by the provincial or federal government and identified by a posted sign, and those of possible historic significance, as noted by field investigators. Those comprising the latter group were subsequently assessed by heritage experts.

Proposed features (features whose plans have not been approved) were considered as lower constraints. Planned features (features that have been approved) were assessed as existing features).

The following local community features were not identified within the study areas, and so did not contribute to this stage of the site selection process:

1) jail
2) health clinic

The future features noted were limited to those identified by agency representatives and those observed during field investigations (through signs and ongoing construction). This is not considered a complete listing.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF POTENTIAL SITES

FACTOR GROUPING: Socio-Economic Characteristics

FACTOR: Population Density

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

Based on 1981 Census data for enumeration areas on, or adjacent to, site areas.

RATIONALE/SIGNIFICANCE:

Site development could create impacts affecting the normal use and enjoyment of residential properties. Such impacts could inlude noise, odour, lighting and traffic disruptions that might be associated with facility development. There may be concern regarding the potential risk to health through exposure from an accidental spill.

SOURCES OF INFORMATION:

1) 1981 Census Data - population for enumeration areas
2) Statistics Canada enumeration area mapping (1976 and 1981)
3) Statistics Canada enumeration area size data (based on 1976 enumeration area boundaries)

INTERPRETATION/METHODOLOGY:

Enumeration area densities were calculated and grouped to construct an eight (8) level scale as follows:

<21 people/km^2	101-200 people/km^2
21-40	201-300
41-60	301-400
61-100	>400

There were no precedents found for scaling densities in constraint mapping exercises for identifying hazardous waste sites. Therefore, the above scale was determined by IER professional staff with the guiding principle being that areas with lower population densities would provide greater possibilities for siting, since fewer people would be affected. The density calculations were done by averaging the 1981 population over the area.

CRITERIA/INDICATORS:

Areas of population density higher than 400 persons/sq.km. were considered high constraint. Enumeration areas with population density of 400 persons/sq.km. or greater are defined as urban areas by Statistics Canada (1981 Census, Geography Tape File). Areas of 201-400 persons/sq.km. were considered moderate constraints.

COMMENTS/ASSUMPTIONS/LIMITATIONS:

Criteria were based on professional judgement since guidelines or examples from similar studies were not identified.

Several enumeration areas classified as "urban" enumeration areas by Statistics Canada (1981 Census, Geography Tape File) were included within the site areas. Statistics Canada does not calculate the area of "urban" enumeration areas. Consequently, the areas had to be hand calculated using 1:50,000 scale maps. In addition, the boundaries of some enumeration areas changed between the 1976 and 1981 censuses. In these instances IER staff were required to hand calculate the area of each of the 1981 enumeration areas so that it reflected the new 1981 boundaries. Area calculations and thus density are approximate.

Density calculations did not indicate precisely where the population is located within the enumeration area. However, these data were useful for reinforcing other factors which could be used for identifying site boundaries.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF POTENTIAL SITES

FACTOR GROUPING: Socio-Economic Characteristics

FACTOR: Proximity to Nearest Population Concentration(s)

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

Population concentrations are defined as built-up residential areas of more than 15 residences - 45-50 residents.

RATIONALE/SIGNIFICANCE:

Site development could create impacts affecting the normal use and enjoyment of residential properties. Such impacts could include noise, odour, lighting and traffic disruptions that might be associated with facility development. There may be concern regarding the potential risk to health through exposure from an accidental spill.

SOURCES OF INFORMATION:

1) 1:50,000 base maps identifying the locations of sites and municipalities
2) field investigations
3) municipal directory
4) municipal contacts (see Contact List, Appendix A)
5) Statistics Canada, 1981 Census data

INTERPRETATION/METHODOLOGY:

The site areas were plotted on 1:50,000 scale maps. The distance from the edge of the 400 metre study area to the edge of the nearest population concentration(s) was measured. The population of each residential area identified was then obtained through one of the above noted sources. Of these, population concentrations of less than 45-50 people were eliminated from further consideration.

CRITERIA/INDICATORS:

The numbers and sizes of population concentrations, and their relative distances from site area study areas, provided a base for comparison.

COMMENTS/ASSUMPTIONS/LIMITATIONS:

The distance to the nearest population concentration from a study area is approximate because of the scale used (1:50,000). In some instances, population size was not available through any of the above mentioned sources. These residential areas, therefore, were retained for further consideration. They may not, however, comprise the defined minimum population.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF CANDIDATE SITES
SITE AND STUDY AREA

FACTOR GROUPING: Socio-Economic Characteristics

FACTOR: Community and Recreation Features

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

As previously defined. See factor sheets for Community and Recreation Features for Identification of Potential Sites, and for Identification of Site Areas. The definition of historic features was broadened to include features constructed prior to 1900 and deemed historically significant by heritage experts.

RATIONALE/SIGNIFICANCE:

As noted in factor sheets for Community and Recreation Features, for Identification of Site Areas and for Identification of Potential Sites

SOURCES OF INFORMATION:

As previously noted in the factor sheet, Community and Recreation Features, for Identification of Potential Sites. Additional sources of information were preliminary research by heritage experts and aerial photographs.

INTERPRETATION/METHODOLOGY:

As previously noted in the factor sheet, Community and Recreation Features, for Identification of Potential Sites. Data were used to identify the position of features in relation to the sites and the study areas.

CRITERIA/INDICATORS:

The data collected from the field investigations included:

1) Location
   - of the feature was mapped
   - location in terms of municipality, lot and concession and road was noted
   - used to confirm location as identified from secondary sources and by government agency representatives

2) Current Use
   - of the feature at the time of field investigations
   - refers to whether feature was being used as was intended or for some other purpose (e.g., a golf course being used for cross country skiing)
   - refers also to features which appeared to be no longer in use

3) Seasonal Use
   - noted whether feature appeared to be used year-round or seasonally
   - noted whether use seemed to vary from season to season

4) Level of Use
   - estimated number of people using feature at the time of the survey (not intended to provide a complete assessment of use of feature)

5) Religious and Ethnic Affiliation
   - as identified by signs

6) Historic Significance
   - as identified by a sign
   - possible significance noted also and investigated later by a historic consultant

7) Structures/Facilities
   - within view
   - indoor facilities were not identified unless noted by sign on property

8) Maintenance
   - of the property and any structures or facilities
   - based on the judgement of the field team, at the time of the survey

COMMENTS/ASSUMPTIONS/LIMITATIONS:

1) The field investigations were taken from public roads. Natural or man-made features occasionally obscured some features from view.

2) Proposed and planned community and recreation features were limited to those identified by government agencies during previous stages in the study and those observed during the field investigations (through signs and structures under construction).

3) The property boundaries of features were not possible to determine in all instances.

4) Historic features identified through the investigation by the heritage experts were based on one site visit and preliminary research. More detailed research is needed to identify the full extent and significance of the historic features on-site and in the study areas.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF CANDIDATE SITES
SITE AND STUDY AREA

FACTOR GROUPING:	FACTOR:
Socio-Economic Characteristics	Estimated Population

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

Estimated population includes the residential population potentially displaced on-site, and residents within the 1,000 metre or 500 metre study areas and within five kilometres of each potential site.

RATIONALE/SIGNIFICANCE:

Site development could create impacts affecting the normal use and enjoyment of residential properties. Such impacts could include noise, odour, lighting and traffic disruptions that might be associated with facility development. There may be concern regarding the potential risk to health through exposure from an accidental spill.

SOURCES OF INFORMATION:

1) Dwelling counts from field investigations.
2) Average municipal household size, from the 1981 Census, for each municipality in which a site and study area are located.
3) Compusearch Market and Social Research Limited, Tradarea: Trade Area Analysis System. Toronto, Ontario.

INTERPRETATION/METHODOLOGY:

Population on-site and within 1000 metre and 500 metre study areas:

The residential population was estimated by multiplying the dwelling counts obtained through field investigations by the average household size for the municipality in which the site/study area is located.

The residential population estimates provided an indication of the potential population which would be displaced (population on-site) and affected (in the study area) should a site be developed.

Within 5 kilometres of each potential site:

The population within 5 kilometres of each potential site was estimated using population data from the 1981 Census. A 5 kilometre radius was extended from the road intersection nearest each site. Data from enumeration areas (EAs) were used to assign population to the 5 kilometre radii. Within each EA the point corresponding highest population density is designated as the centroid for the EA. Data for those centroids that fell within the 5 kilometre radius were included in the population estimate.

CRITERIA/INDICATORS:

Residential population on-site and within 1000 metre and 500 metre study areas:
1) dwelling counts
2) average household size

Residential population within 5 kilometres of each potential site:
1) 1981 Census population data by enumeration area

COMMENTS/ASSUMPTIONS/LIMITATIONS:

1) The use of the municipal average household size to determine residential population does not account for variations in household size throughout a municipality. Variations are possible given the small area under consideration. The population factor is an estimate only.

2) The population data provided by Compusearch is approximate only. The method used to estimate population (as described on page 65, Table 4.4) provides approximate population figures within 5 kilometres of the sites.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF CANDIDATE SITES
SITE AND STUDY AREA

FACTOR GROUPING:	FACTOR:
Socio-Economic Characteristics	Population Concentrations

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

Population concentrations are defined as rural residential strip developments and subdivisions, rural estate developments, hamlets and villages, small towns and larger municipalities. Population concentrations within the 500 metre and 1,000 metre study areas were noted.

RATIONALE/SIGNIFICANCE:

Site development could create impacts affecting the normal use and enjoyment of residential properties. Such impacts could include noise, odour, lighting and traffic disruptions that might be associated with facility development. There may be concern regarding the potential risk to health through exposure from an accidental spill.

SOURCES OF INFORMATION:

1) Field investigations
2) Statistics Canada, 1981 Census
3) Municipal Directory, 1983
4) Municipal Contacts (see Contact List, Appendix A)

INTERPRETATION/METHODOLOGY:

Population concentrations on sites and in study areas were identified through field investigations, and located on 1:10,000 base maps. The population of each concentration was obtained through one of the above noted sources. Where population figures were not available, estimates were made using dwelling counts and average household size data, by municipality.

CRITERIA/INDICATORS:

1) Number of population concentrations
2) Population

COMMENTS/ASSUMPTIONS/LIMITATIONS:

1) Population figures obtained from a variety of sources as noted above; data from municipal contacts were obtained for those centres for which no formal population figures are maintained and represent estimates only.

2) Population figures for concentrations with municipal status represent the entire municipal population and as such, likely overestimate the population potentially affected.

3) No population concentrations, as defined above, were found on any site or study area. This factor, therefore, did not contribute to the assessment of sites and study areas.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF CANDIDATE SITES
SITE AND STUDY AREA

FACTOR GROUPING: Socio-Economic Characteristics

FACTOR: Community Character

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

The nature of the site and study area land use.

RATIONALE/SIGNIFICANCE:

Community character was used to evaluate the compatibility of the proposed OWMC facilities with the site and study area. Compatibility was assessed in terms of land uses in which the normal use and enjoyment of the property would be reduced through proximity to the proposed facilities. In some settings, the impact of the OWMC facilities might be such that the general character is substantially or completely altered. This is particularly true for rural agricultural areas and highly built-up residential areas without nearby industrial use. Fully integrated, and physical/chemical treatment plant and incinerator sites were regarded as industrial uses and considered incompatible with built-up residential areas and rural areas. Landfills were also considered incompatible with built-up residential areas.

SOURCES OF INFORMATION:

1) Field investigations
2) Socio-economic consultant's observations and professional experience.

INTERPRETATION/METHODOLOGY:

Potential sites were classified into 5 categories using data compiled through field observations. The areas were characterized as: 1) rural; 2) rural residential urban fringe areas; 3) emerging industrial areas; 4) urban fringe industrial areas; 5) heavy industrial areas.

CRITERIA/INDICATORS:

1) Type of predominant land use(s).
2) Nature and intensity of land use changes.
3) Apparent rate of change.

COMMENTS/ASSUMPTIONS/LIMITATIONS:

On the basis of the field investigations, and in the context of relevant professional experience, the socio-economic consultant described the general community character of the site areas.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF CANDIDATE SITES
ACCESS ROUTES

FACTOR GROUPING: Socio-Economic Characteristics

FACTOR: Community and Recreation Features

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

As previously defined. See factor sheets for Community and Recreation Features, for Identification of Potential Sites and for Identification of Site Areas

RATIONALE/SIGNIFICANCE:

As noted in factor sheets for Community and Recreation Features, for Identification of Site Areas and for Identification of Potential Sites

SOURCES OF INFORMATION:

As previously noted in the factor sheet Community and Recreation Features, for Identification of Potential Sites.

INTERPRETATION/METHODOLOGY:

As previously noted in the factor sheet, Community and Recreation Features, for Identification of Potential Sites. Data were used to identify the position of features in relation to the access routes.

CRITERIA/INDICATORS:

The field investigations provided the names and locations of the features identified along the access routes. Each feature was mapped. The field investigations served to confirm the location as identified from secondary sources and by government and agency representatives, in instances where the feature had been previously identified.

COMMENTS/ASSUMPTIONS/LIMITATIONS:

1) The field investigations were taken from public roads. Natural and man-made features occasionally obscured some features from view.

2) Proposed and planned community and recreation features were limited to those observed during the field investigations (through signs and structures under construction).

3) The property boundaries of features were not possible to determine in all instances.

4) Health clinics (refer to the factor sheet, Local Community and Recreation Features, for Identification of Potential Sites) and correctional facilities (refer to the factor sheet, Community Features, for Identification of Site Areas) were identified in the previous two stages as features not noted and thus not contributing to the site selection process. Both these features were identified during access route field investigations at the Candidate Site Identification Stage at which time they assisted in site selection.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF CANDIDATE SITES
ACCESS ROUTES

FACTOR GROUPING: Socio-Economic Characteristics

FACTOR: Estimated Population

FACILITY COMPONENTS AFFECTED: All Components

DEFINITION OF FACTOR:

Estimated population is the residential population abutting an access route.

RATIONALE/SIGNIFICANCE:

The use of a road to transport waste to a site could create impacts affecting the the normal use and enjoyment of residential properties including noise and traffic disruption.

There may be concern regarding the potential risks to health through exposure from an accidental spill.

SOURCES OF INFORMATION:

1) Dwelling counts from field investigations.
2) Average municipal household size, from the 1981 Census, for the municipality in which an access route was located.

INTERPRETATION/METHODOLOGY:

The residential population was estimated by multiplying the counts obtained through field investigations by the average household size for the municipality in which the access route was located.

The residential population estimates provided an indication of the potential population which would be affected should a route be used for access to a site.

CRITERIA/INDICATORS:

Residential Population:
1) dwelling counts
2) average household size

COMMENTS/ASSUMPTIONS/LIMITATIONS:

The use of the municipal average household size to determine residential population does not account for variations in household size throughout a municipality. Variations are possible, given the small area under consideration. The population factor is an estimate only.

OWMC PHASE 3 - FACTORS FOR IDENTIFICATION OF CANDIDATE SITES
ACCESS ROUTES

FACTOR GROUPING: Socio-Economic Characteristics

FACTOR: Population Concentrations

FACILITY COMPONENTS AFFECTED: All components

DEFINITION OF FACTOR:

Population concentrations are defined as rural residential strip developments and subdivisions, rural estate developments, hamlets and villages, small towns and larger municipalities. Population concentrations located along local and regional access routes were noted.

RATIONALE/SIGNIFICANCE:

The use of roads for access to a site could create impacts affecting the normal use and enjoyment of residential properties including noise and traffic disruption.

There may be concern regarding the potential risk to health through exposure from an accidental spill.

SOURCES OF INFORMATION:

1) Field investigations
2) Statistics Canada, 1981 Census
3) Municipal Directory, 1983
4) Municipal Contacts (see Contact List, Appendix A)

INTERPRETATION/METHODOLOGY:

Population concentrations along access routes were identified through field investigations, and located on 1:10,000 base maps. The population of each concentration was obtained through one of the above noted sources. Where population figures were not available, estimates were made using dwelling counts and average household size data. (See Factors for Identification of Candidate Sites - Site and Study Area - Estimated Population, for interpretation and methodology).

CRITERIA/INDICATORS:

1) Number of population concentrations
2) Population

COMMENTS/ASSUMPTIONS/LIMITATIONS:

1) Population figures obtained from a variety of sources as noted above; data from municipal contacts were obtained for those centres for which no formal population figures are maintained, and represent estimates only.

2) Estimates made using dwelling counts pertain to rural concentrations with no municipal status, along access routes. They provide population estimates for residents located adjacent to the access routes only, not those in the potentially affected vicinity. The population concentration figures in these instances were conservative and underestimate potentially affected population.

3) Population figures for concentrations with municipal status represent the entire municipal population and as such, likely overestimate the population potentially affected.

4) Only those population concentrations abutting access routes were noted. Those in the vicinity of access routes, and so potentially affected, were not considered. In subsequent stages of the study, when possible zones of impact have been determined, all population concentrations within the impact zones will be considered.

APPENDIX C

Central Area Access
Route Comparison: Field
Investigation Data

CENTRAL AREA ACCESS ROUTE COMPARISON
FIELD INVESTIGATION DATA

Route	Distance Through Built-Up/ Urban Area (Metres)	Number of Communities By Population	Number Residences (Rural & Non-Farm Residences)	Existing Community & Recreation Features
1. South on Highway 20 to Woodburn Road; south on Woodburn Road to Hamilton-Wentworth Regional Road 622; west on Hamilton-Wentworth Regional Road 622.	7,500	Stoney Creek: 37,481 Woodburn: 245	205	Churches: 3 Schools: 3 Parks: 0 Other: 7 TOTAL 13
2. South on Highway 20 to Woodburn Road; south on Woodburn Road to Hamilton-Wentworth Regional Road 622; east on Hamilton-Wentworth Regional Road 622 to Niagara Regional Road 65; east on Niagara Regional Road 65	7,500	Stoney Creek: 37,481 Woodburn: 245	205	Churches: 4 Schools: 3 Parks: 0 Other: 11 TOTAL 18
3. South on Niagara Regional Road 12 to Highway 20; east on Highway 20 to Niagara Regional Road 14; south on Niagara Regional Road 14[1]	2,800	Grimsby: 16,000 Smithville: 2,000	108	Churches: 6 Schools: 3 Parks: 0 Other: 3 TOTAL 12

Route	Distance Through Built-Up/ Urban Area (Metres)	Number of Communities By Population	Number Residences (Rural & Non-Farm Residences)	Existing Community & Recreation Features
4. South on Bartlett Ave. to Niagara Regional Road 81, west on Niagara Regional Road 81 to Niagara Regional Road 714; south on Niagara Regional Road 714 to Niagara Regional Road 73; east on Niagara Regional Road 73 to Niagara Regional Road 14; south on Niagara Regional Road 14 to Highway 20; east on Highway 20 to Niagara Regional Road 14, west on Niagara Regional Road 14 to Niagara Regional Road 16; south on Niagara Regional Road 16[1]	2,600	Grimsby: 16,000 Smithville: 2,000	66	Churches: 5 Schools: 1 Parks: 0 Other: 4 TOTAL 10

C-3

Note:

1) Partial information is provided for Routes 3 and 4. Route 3 was investigated as far as Highway 20 and Niagara Regional Road 14 at Smithville. Information on the remaining portion of this route can be found in Marshall, Macklin, Monaghan, Site Selection Process, Phase 3b: Selection of Candidate Sites, Land Use 1984. Similarly, Route 4 was investigated as far as Niagara Regional Road 14 at Highway 20. Information on the remaining portion of this route can be found in the above noted report.

APPENDIX D

Sample Field Observation Form

CHECK:
SITE
400M ZONE

I.E.R. NOV. 30/83

FIELD OBSERVATION INFORMATION

SITE NO.: LF4W AERIAL PHOTO NO.:

INVESTIGATORS:

DATE:

TIME:

FEATURE NUMBER	FACILITY TYPE	NAME/TYPE	LOCATION				GENERAL DESCRIPTION . BUILDING/SITE CHARACTERISTICS/ SPECIAL FEATURES (AS DETERMINED BY UNOBTRUSIVE FIELD INVESTIGATION) . LEVEL OF USE . SEASONAL USE . UPKEEP . CURRENT USE . PROGRAMS/ SERVICES . HOURS OF USE . ESTIMATE # OF ROOMS (AND PORTABLES) . # OF STOREYS . KIND OF RECREATION FACILITIES . IS SITE FENCED/BUFFERED/ LANDSCAPED? . IS PARK SITE ACTIVE/PASSIVE?
			STREET	LOT	CONCESSION	MUNICIPALITY	
1	Conservation Area	Binbrook Conservation Area	Kirk Rd. West	17 to 20	7	Glanbrook Twp.	- controlled hunting area (sign) - baited area - dam & reservoir - under jurisdiction of Niagara Region Conservation Authority - family camping - boat ramp
2	Theatre	Binbrook Little Theatre	Binbrook Rd. W.	1 Block 4	3	Glanbrook Twp. -Binbrook	- 1-storey - converted building - old school house?
3	Church	Binbrook Baptist Church	Binbrook Rd. W.	1 Block 4	3	Glanbrook Twp. -Binbrook	- approximately 1 acre in size - 1-storey, small building - sanctuary and another section of building - from sign - Family School; Ladies Coffee Hour; Prayer Meeting; Bible Study - constructed 1971
4	Cemetery	Binbrook Baptist Cemetery	Binbrook Rd. W.	1 Block 4	3	Glanbrook Twp. -Binbrook	- in Church yard - small - approximately 50 headstones

D-2

CHECK:
SITE
400M ZONE

SITE NO.: LF4W

FEATURE NUMBER	DISTINGUISHING FEATURES (NOTE ANY SPECIAL FEATURES OR CHARACTERISTICS) SUCH AS: . HISTORICAL SIGN, . ETHNIC/RELIGIOUS AFFILIATION . FOR SALE SIGN . CONSTRUCTION/ RENOVATION	GENERAL COMMENTS . LIMITATIONS TO OBSERVATION . JUDGEMENTS	INFORMATION SOURCES (IE. SIGNS, ANY PRINTED MATERIALS PICKED UP, INVESTIGATOR'S OBSERVATIONS)	AGENCY CONTACT (TO VERIFY OR CLARIFY OBSERVATIONS OR PREVIOUSLY MAPPED DATA; NOTE THE AGENCY THAT SHOULD BE CONTACTED)
1			- sign	
2				
3	Baptist		- sign	(Pastor D. Theobald)
4	Baptist			

CHECK:
SITE
400M ZONE

SITE NO.: LF4W

FEATURE NUMBER	PHOTOGRAPH RECORD				OFFICE INFORMATION	INFORMATION SOURCES	CROSS CHECKED BY	DATE
	PHOTO NO.	DATE	LOCATION	DIRECTION				
1					- west of Hwy. 56 - on Welland River - Niagara Peninsula Conservation Authority - unstructured winter sports, parking, picnic tables, camping, swimming, boating, fishing, pavilion, beach area and change house, boat launch - general public	-Niagara Peninsula Conservation Authority -Ontario Recreation Supply Inventory		
2	I	Dec. 5	Binbrook Rd. West	Facing east -theatre & church				
3	I	Dec. 5	Binbrook Rd. West	Facing east -theatre & church				
4					- 0.9 acres - on Binbrook Rd., west of Hwy. 56	-Township of Glanbrook		

CHECK:
SITE
400M ZONE

I.E.R. NOV. 30/83

FIELD OBSERVATION INFORMATION

SITE NO.: LF4W AERIAL PHOTO NO.: INVESTIGATORS: DATE:
TIME:

FEATURE NUMBER	FACILITY TYPE	NAME/TYPE	LOCATION				GENERAL DESCRIPTION
			STREET	LOT	CONCESSION	MUNICIPALITY	. BUILDING/SITE CHARACTERISTICS/ SPECIAL FEATURES (AS DETERMINED BY UNOBTRUSIVE FIELD INVESTIGATION) . LEVEL OF USE . SEASONAL USE . PROGRAMS/ SERVICES . UPKEEP . CURRENT USE . HOURS OF USE . ESTIMATE # OF ROOMS (AND PORTABLES) . # OF STOREYS . KIND OF RECREATION FACILITIES . IS SITE FENCED/BUFFERED/ LANDSCAPED? . IS PARK SITE ACTIVE/PASSIVE?
5	Fairgrounds	Binbrook Fair-grounds	Hwy. 56	1 Block 4	3	Glanbrook Twp. -Binbrook	- facilities-track with grandstand - open pavilion - 4 baseball diamonds with bleachers - 3 lit - Agricultural Hall (under grandstand) - picnic tables - stables - swings & playground - "Commercial Building" - adjacent park - Lions Club - passive, treed - small building on fairground property - constructed by Blackheath - Binbrook Lions Club, Agricultural Society & Township of Glanbrook - between 2 fairground entrances - Binbrook Soldiers Memorial Building - fronting Hwy. 56 - use unknown but in use.

CHECK:
SITE
400M ZONE

SITE NO.: LF4W

FEATURE NUMBER	DISTINGUISHING FEATURES (NOTE ANY SPECIAL FEATURES OR CHARACTERISTICS) SUCH AS: . HISTORICAL SIGN, . ETHNIC/RELIGIOUS AFFILIATION . FOR SALE SIGN . CONSTRUCTION/ RENOVATION	GENERAL COMMENTS . LIMITATIONS TO OBSERVATION . JUDGEMENTS	INFORMATION SOURCES (IE. SIGNS, ANY PRINTED MATERIALS PICKED UP, INVESTIGATOR'S OBSERVATIONS)	AGENCY CONTACT (TO VERIFY OR CLARIFY OBSERVATIONS OR PREVIOUSLY MAPPED DATA; NOTE THE AGENCY THAT SHOULD BE CONTACTED)
5		- check fairground property boundaries	- signs - observations	

CHECK:
SITE
400M ZONE
SITE NO.: LF4W

FEATURE NUMBER	PHOTOGRAPH RECORD				OFFICE INFORMATION	INFORMATION SOURCES	CROSS CHECKED BY	DATE
	PHOTO NO.	DATE	LOCATION	DIRECTION				
5	G	Dec. 5	Fairground -Hwy. 56	Facing west Binbrook Fairgrounds	- 11.2 acres (includes 4 acres of municipal park) - provincial ownership - hall - old Finsmen Hall on fairgrounds used for storage - ball diamonds - 3 halls for exhibits - race track. - sports fields - playground, picnic tables - equestrian facilities - harness racing - 3 day fair - used 1 other day for another annual event	- Fairground Brochure (Ministry of Agriculture & Food) - Dave Taff, Recreation Dept. - Craig Switzer, Clerk, Glanbrook Twp.		
	H	Dec. 5	Fairground Hwy. 56	Facing northwest Binbrook Fairgrounds				

APPENDIX E

Comparative Evaluation
of Access Route Options

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
INTEGRATED SITES

FACTORS	SITE LF4N - NORTH OPTIONS[4]				
	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
Local Access Road(s): Population concentrations by number and size	none	-[3]	none	none	-[3]
Estimated population abutting access road(s)	48	-	80	71	-
Community features	1 - Milton District Hospital	-	1 - Century Farm	1 - Century Farm	-
Recreation features	0	-	0	0	-
Regional Access Road(s): Population concentrations by number and size	Milton (29,591)	Milton (29,591)	Boyne[2] (<25) Omagh[2] (30)	Boyne[2] (<25) Omagh[2] (30)	Agerton[2] (<25) Drumquin[2] (<25) Omagh[2] (30) Boyne[2] (<25)
Estimated population abutting access road(s)[2]	4	163	71	116	276
Community and recreation features	5 - cemetery correctional centre chamber of commerce police station park	5 - correctional centre park chamber of commerce police station hall	4 - church and cemetery (2) park community centre	4 - church and cemetery (2) park community centre	9 - golf course church and cemetery (3) horse stables/ riding school parks (2) community centre
Ranking[5]	3	3	1	2	3

Refer to page E-21 for footnotes

SITE LF4N cont'd

SITE LF4N - SOUTH OPTIONS			
FACTORS	OPTION 6	OPTION 7	OPTION 8
Local Access Road(s):			
Population concentrations by number and size	-[3]	-[3]	-[3]
Estimated population abutting access road(s)	-	-	-
Community features	-	-	-
Recreation features	-	-	-
Regional Access Road(s):			
Population concentrations by number and size	Drumquin[2] (< 25) Omagh[2] (30) Boyne[2] (< 25) Paradise Sub-division	Oakville (76,720) Drumquin[2] (< 25) Omagh[2] (30) Boyne (< 25)	Palermo[2] (200) Boyne (< 25)
Estimated population abutting access road(s)[4]	262	340	346
Community and recreation features	6 - parks (2) school community centre church and cemetery (2)	20 - municipal centre mall churches (4) college memorial hall church site coast guard depot schools (2) maintenance yard parks and recreation operations centre health clinic parks (2) community centre cemeteries (2)	6 - scenic trail riding MTC patrol park golf club regional offices provincial park
Ranking[5]	1	2	1

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
INTEGRATED SITES

FACTORS	SITE LF10W OPTION 1	SITE LF11W OPTION 1	SITE LF1E OPTION 1	SITE LF1E OPTION 2	SITE LF1E OPTION 3
Local Access Road(s):					
Population concentrations by number and size	none	-[3]	-[3]	none	-[3]
Estimated population abutting access road(s)	20	-	-	23	-
Community features	0	-	-	0	-
Recreation features	0	-	-	0	-
Regional Access Road(s):					
Population concentrations by number and size	none	none	Welland (45,417)	none	none
Estimated population abutting access road(s)	141	128	90	12	90
Community and recreation features	3 - Shaver Family Cemetery MTC yard Ancaster Double Rink	3 - Shaver Family Cemetery MTC yard Ancaster Double Rink	34 - exhibition minigolf cemeteries (2) schools (2) churches(6) college government buildings (6) temple club post office halls (3) salvation army park fire stations (2) YMCA multicultural centre shopping plazas/malls (3) temple	1 - Canadian-Hungarian Cultural Centre	3 - park fire station hall
Ranking[5]	1	1	3	1	2

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
INTEGRATED SITES

FACTORS	SITE LF3C - OPTIONS					
	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5	OPTION 6
Local Access Road(s): Population concentrations by number and size	none	none	none	none	-[3]	none
Estimated population abutting access road(s)	84	84	84	84	-	84
Community features	0	0	0	0	-	0
Recreation features	0	0	0	0	-	0
Regional Access Road(s): Population concentrations by number and size	Vineland (1,150) Bismark (50)	Vineland (1,150) Wellandport (200)	Beamsville (5,000) St. Ann's (75) Bismark (50)	Grimsby (16,007) Smithville (2,000) Bismark (50)	Grimsby (16,007) Smithville (2,000)	Grimsby (16,007) Smithville (2,000) Bismark (50)
Estimated population abutting access road(s)	432	492	316	237	234	513
Community and recreation features	11 - experimental farm churches (3) schools (2) conservation areas (2) women's centre campsite hall	15 - experimental farm churches (4) school conservation area women's centre campsite hall library post office Niagara Region Road Yard lodge Odd Fellows Temple	9 - senior citizens residence parks (2) church cemetery synagogue Bismark Kartway hall school	15 - home for aged police station churches (6) Niagara Region Road Yard school railway station (possibly historic) park Bismark Kartway hall post office	19 - home for aged police station churches (6) Niagara Region Road Yard schools (2) railway station (possibly historic) post office library fire hall cemetery municipal offices conservation club town hall	18 - schools (3) churches (6) halls (3) minigolf community centre/arena post office cemetery park Bismark Kartway
Ranking[5]	1	2	3	4	5	8

Refer to page E-21 for footnotes

SITE LF3C cont'd

FACTORS	SITE LF3C - OPTIONS		
	OPTION 7	OPTION 8	OPTION 9
Local Access Road(s): Population concentrations by number and size	-[3]	-[3]	none
Estimated population abutting access road(s)	-	-	84
Community features	-	-	0
Recreation features	-	-	0
Regional Access Road(s): Population concentrations by number and size	Grimsby (16,007) Smithville (2,000)	Smithville (2,000) Grimsby (16,007)	Smithville (2,000) Grimsby (16,007) Bismark (50)
Estimated population abutting access road(s)[2]	510	262	266
Community and recreation features	22 - schools (4) churches (6) halls (2) minigolf community centre/ arena post office municipal offices library fire hall conservation club cemeteries (2) town hall	22 - home for aged (2) police station churches (5) schools (3) legion cemeteries (2) Niagara Region Road Yard railway station (possibly historic) post office municipal offices library fire hall conservation club town hall	18 - home for aged (2) police station churches (5) schools (2) legion cemetery Niagara Region Road Yard railway station (possibly historic) park Bismark Kartway hall post office
Ranking[5]	9	7	6

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
INTEGRATED SITES

FACTORS	SITE LF8C - OPTIONS					
	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5	OPTION 6
Local Access Road(s): Population concentrations by number and size	none	none	none	none	none	none
Estimated population abutting access road(s)	11	11	11	11	11	11
Community features	0	1-church	0	0	0	0
Recreation features	0	0	0	0	0	0
Regional Access Road(s): Population concentrations by number and size	Vineland (1,150)	Vineland (1,150)	Beamsville (5,000) St. Ann's (75) Bismark (50)	Grimsby (16,007) Smithville (2,000) Bismark (50)	Grimsby (16,007) Smithville (2,000) Bismark (50)	Grimsby (16,007) Smithville (2,000) Bismark (50)
Estimated population abutting access road(s)	257	433	431	360	636	388
Community and recreation features	9 - conservation areas (2) experimental farm churches (3) school women's centre campsite	9 - experimental farm churches (3) school conservation area women's centre campsite Niagara Region Road Yard	9 - seniors residence parks (2) synagogue church Bismark Kartway schools (2) cemetery	15 - home for aged police station churches (6) Niagara Region Road Yard schools (2) railway station (possibly historic) park Bismark Kartway post office	18 - schools (4) churches (6) minigolf halls (2) park Bismark Kartway community centre/ arena cemetery post office	18 - homes for aged (2) police station churches (5) legion cemetery schools (3) Niagara Region Road Yard railway station (possibly historic) park Bismark Kartway post office
Ranking[5]	1	2	3	4	6	5

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
INTEGRATED SITES

FACTORS	SITE LF9C - OPTIONS				
	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
Local Access Road(s): Population concentrations by number and size	-[3]	-[3]	-[3]	-[3]	-[3]
Estimated population abutting access road(s)	-	-	-	-	-
Community features	-	-	-	-	-
Recreation features	-	-	-	-	-
Regional Access Road(s): Population concentrations by number and size	Vineland (1,150)	Beamsville (5,000) St. Ann's (75) Bismark (50)	Grimsby (16,007) Smithville (2,000) Bismark (50)	Grimsby (16,007) Smithville (2,000) Bismark (50)	Grimsby (16,007) Smithville (2,000) Bismark (50)
Estimated population abutting access road(s)	271	407	335	611	364
Community and recreation features	9 - experimental farm churches (3) conservation areas (2) school women's centre campsite	9 - home for aged parks (2) synagogue church Bismark Kartway schools (2) cemetery	15 - home for aged police station churches (6) Niagara Region Road Yard schools (2) railway station (possibly historic) post office Bismark Kartway park	18 - schools (4) churches (6) minigolf halls (2) post office park Bismark Kartway community centre/ arena cemetery	18 - homes for aged (2) police station churches (5) schools (3) legion cemetery railway station (possibly historic) Niagara Region Road Yard park Bismark Kartway post office
Ranking[5]	1	2	3	4	4

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
INTEGRATED SITES

FACTORS	SITE LF3E - OPTIONS		
	OPTION 1	OPTION 2	OPTION 3
Local Access Road(s):			
Population concentrations by number and size	-[3]	-[3]	-[3]
Estimated population abutting access road(s)	-	-	-
Community features	-	-	-
Recreational features	-	-	-
Regional Access Road(s):			
Population concentrations by number and size	Welland (45,417)	none	none
Estimated population abutting access road(s)	112	9	112
Community and recreation features	33 - exhibition minigolf cemeteries (2) schools (2) churches (6) college government buildings (6) temple club post office halls (3) salvation army park fire station YMCA multicultural centre shopping plaza/mall (3) temple	1 - Canadian-Hungarian Cultural Centre	2 - hall park
Ranking[5]	3	1	2

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
PARTIALLY INTEGRATED SITES
SITING OPTIONS PI1A1/LF2N

FACTORS	SITE PI1A1				SITE PI1A1 to LF2N	
	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 1	OPTION 2
Local Access Road(s): Population concentrations by number and size	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]
Estimated population abutting access road(s)	-	-	-	-	-	-
Community features	-	-	-	-	-	-
Recreation features	-	-	-	-	-	-
Regional Access Road(s): Population concentrations by number and size	Derry West[2] (110) Malton (32,750)	Derry West[2] (110)	Malton (32,750)	none	Malton (32,750)	none
Estimated population abutting access road(s)[4]	117	128	46	83	53	66
Community and recreation features	14 - Hansa Haus cemeteries (5) public works yard skeet club parkland post office school church driver examination centre Century Farm	9 - Hansa Haus cemeteries (3) public works yard ethnic club banquet hall Century Farm parkland	11 - cemeteries (4) parkland skeet club post office school church Century Farm driver examination centre	6 - cemeteries (2) ethnic club banquet hall Century Farm parkland	11 - cemeteries (4) skeet club parkland church school Century Farm driver examination centre post office	6 - Century Farm cemeteries (2) hall parkland ethnic club
Ranking[5]	4	2	3	1	2	1

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
PARTIALLY INTEGRATED SITES
SITING OPTION PI1N/LF2N

FACTORS	SITE PI1N - NORTH OPTIONS[4]			
	OPTION 1	OPTION 2	OPTION 3	OPTION 4
Local Access Road(s).				
Population concentrations by number and size	none	-[3]	none	-[3]
Estimated population abutting access road(s)	48	-	80	-
Community features	1-Milton District Hospital	-	1-Century Farm	-
Recreation features	0	-	0	-
Regional Access Road(s): Population concentration by number and size	Milton (29,591)	Milton (29,591)	Omagh[2] (30) Boyne[2] (<25)	Agerton[2] (<25) Drumquin[2] (<25) Omagh[2] (30) Boyne[2] (< 25)
Estimated population abutting access road(s)[2]	0	173	55	276
Community and recreation features	5 - cemetery police station chamber of commerce park correctional centre	6 - correctional centre park police station hall chamber of commerce Century Farm	4 - church and cemetery (2) park community centre	9 - golf course church and cemetery (3) horse boarding/ riding school parks (2) community centre
Ranking[5]	3	3	1	2

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
PARTIALLY INTEGRATED SITES
SITING OPTION PI1N/LF2N

FACTORS	SITE PI1N - SOUTH OPTIONS[4]		
	OPTION 5	OPTION 6	OPTION 7
Local Access Road(s): Population concentrations by number and size	-[3]	-[3]	-[3]
Estimated population abutting access road(s)	-	-	-
Community features	-	-	-
Recreation features	-	-	-
Regional Access Road(s): Population concentrations by number and size	Drumquin[2] (< 25) Omagh[2] (30) Paradise Subdivision Boyne[2] (< 25)	Drumquin[2] (< 25) Omagh[2] (30) Oakville (76,720) Boyne[2] (< 25)	Palermo[2] (200)
Estimated population abutting access road(s)	186	565	282
Community and recreation features	6 - parks (2) school church and cemetery (2) community centre	18 - municipal office mall churches (2) college memorial hall church site Coast Guard Depot schools (2) maintenance yard parks and recreation operations center health clinic parks (2) community centre cemeteries (2)	6 - scenic trail riding MTC patrol park golf club regional offices provincial park
Ranking[5]	1	3	2

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
PARTIALLY INTEGRATED SITES
SITING OPTION PI1N/LF2N

FACTORS	SITE PI1N to LF2N - OPTIONS			
	OPTION 1	OPTION 2	OPTION 3	OPTION 4
Local Access Road(s):				
Population concentrations by number and size	-[3]	none	none	-[3]
Estimated population abutting access road(s)	-	80	48	-
Community features	-	1-Century Farm	1-Milton District Hospital	-
Recreation features	-	0	0	-
Regional Access Road(s):				
Population concentrations by number and size	Agerton[2] (<25) Drumquin[2] (<25) Omagh[2] (30) Boyne[2] (<25) Derry West[2] (110)	Omagh[2] (30) Boyne[2] (<25) Derry West[2] (110)	Milton (29,591) Derry West[2] (110)	Milton (29,591) Derry West[2] (110)
Estimated population abutting access road(s)	308	183	80	207
Community and recreation features	10 - community centre church and cemetery (3) parks (2) school horse boarding/ riding golf course Hansa Haus	5 - Hansa Haus church and cemetery (2) park community centre	8 - Hansa Haus correctional centre park police chamber of commerce cemetery plaza YMCA	7 - Hansa Haus correctional centre park police chamber of commerce hall Century Farm
Ranking [5]	2	1	4	3

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
PARTIALLY INTEGRATED SITES
SITING OPTION PI1N/LF4N

FACTORS	SITE PI1N OPTION 1	SITE PI1N-LF4N OPTION 1	SITE LF4N
Local Access Road(s):			
Population concentrations by number and size	See Siting Option PI1N/LF2N	-[3]	See Integrated Siting Option LF4N
Estimated population abutting access road(s)		-	
Community features		-	
Recreation features		-	
Regional Access Road(s):			
Population concentrations by number and size		none	
Estimated population abutting access road(s)		7	
Community and recreation features		0	
Ranking[5]		1	

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
PARTIALLY INTEGRATED SITES
SITING OPTION PI13N/LF4N

FACTORS	SITE PI13N - NORTH OPTIONS[4]			SITE PI13N - SOUTH OPTIONS[4]		
	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5	OPTION 6
Local Access Road(s): Population concentrations by number and size	0	0	0	0	0	0
Estimated population abutting access road(s)	84	71	4	4	4	4
Community features	1-Century Farm	1-Century Farm	0	0	0	0
Recreation features	0	0	0	0	0	0
Regional Access Road(s): Population concentrations by number and size	Omagh[2] (30)	Omagh[2] (30)	Agerton[2] (<25) Drumquin[2] (<25)	Drumquin[2] (<25) Paradise Subdivision	Oakville (76,720) Drumquin[2] (<25)	Palermo[2] (200) Omagh[2] (30) Boyne[2] (<25)
Estimated population abutting access road(s)[3]	20	13	173	157	231	413
Community and recreation features	0	0	5 - church & cemetery golf course park school horse boarding/ riding	2 - park school	14 - municipal centre mall churches (2) college memorial hall church site coast guard depot schools (2) maintenance yard parks & recreation operations centre health clinic park	10 - provincial park regional offices golf club parks (2) scenic trail riding community centre church & cemetery (2) MTC patro
Ranking[5]	2	1	3	1	3	2

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS
PARTIALLY INTEGRATED SITES
SITING OPTION PI13N/LF4N

FACTORS	SITE PI13N to LF4N OPTION 1
Local Access Road(s):	
Population concentrations by number and size	0
Estimated population abutting access road(s)	4
Community features	0
Recreation features	0
Regional Access Road(s):	
Population concentrations by number and size	Boyne[2] (<25) Omagh[2] (30)
Estimated population abutting access road(s)[2]	109
Community and recreation features	4 - community centre park church and cemetery (2)
Ranking[5]	1

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
PARTIALLY INTEGRATED SITES
SITING OPTION PI13N/LF2N

FACTORS	SITE PI13N	SITE PI13N to LF2N			SITE LF2N	
	OPTION 1	OPTION 1	OPTION 2	OPTION 3	OPTION 1	OPTION 2
Local Access Road(s): Population concentrations by number and size	see siting option PI3N/LF4N	0	0	0	-[3]	-[3]
Estimated population abutting access road(s)		4	84	71	-	-
Community features		0	Century Farm	Century Farm	-	-
Recreation features		0	0	0	-	-
Regional Access Road(s): Population concentrations by number and size		Agerton[2] (<25) Drumquin[2] (<25) Derry West[2] (110)	Omagh[2] (30) Derry West[2] (110)	Derry West[2] (110)	Derry West[2] (110)	-
Estimated population abutting access road(s)[2]		247	52	39	32	16
Community and recreation features		6 - Hansa Haus golf course church & cemetery horse stables/ riding school park	1 - Hansa Haus	1 - Hansa Haus	1 - Hansa Haus	0
Ranking[5]		3	2	1	2	1

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
PARTIALLY INTEGRATED SITES
SITING OPTIONS PI2W/LF10W & PI2W/LF11W

FACTORS	SITE PI2W OPTION 1	SITE PI2W to LF10W OPTION 1	SITE PI2W to LF11W OPTION 1
Local Access Road(s):			
Population concentrations by number and size	none	none	none
Estimated population abutting access road(s)	20	20	10
Community features	1 - road maintenance building	0	0
Recreation features	0	0	0
Regional Access Road(s):			
Population concentrations by number and size	none	none	none
Estimated population abutting access road(s)	0	128	112
Community and recreation features	0	2 - double rink MTC yard	2 - double rink MTC yard
Ranking[5]	1	1	1

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
PARTIALLY INTEGRATED SITES
SITING OPTIONS PI18E/LF1C

FACTORS	SITE PI18E		PI18E-LF1C	SITE LF1C		
	OPTION 1	OPTION 2	OPTION 1	OPTION 1	OPTION 2	OPTION 3
Local Access Road(s): Population concentrations by number and size	-[3]	-[3]	none	none	none	none
Estimated population abutting access road(s)	-	-	10	4	10	10
Community features	-	-	0	0	0	0
Recreation features	-	-	0	0	0	0
Regional Access Road(s): Population concentrations by number and size	none	Welland (45,417)	none	Vineland (1,150)	none	Welland (45,417)
Estimated population abutting access road(s)	42	42	151	546	196	196
Community and recreation features	1 - Hunt Club	32 - Hunt Club, exhibition, mini golf, shopping centres (3), cemeteries (2), schools (2), churches (6), college, government buildings (6), temple, post office, multicultural centre, halls (2), Salvation Army, fire station, Temple Club, YMCA	1 - Welland Feeder Canal	11 - experimental farm, churches (4), school, conservation area, women's centre, campsite, golf & country club, road maintenance yard	2 - Hunt Club, Welland Feeder Canal	33 - Hunt Club, exhibition, mini golf, shopping centres (3), cemeteries (2), schools (2), churches (6), college, post office, government buildings (6), temple, multicultural centre, Salvation Army, halls (2), fire station, YMCA, Temple Club, Welland Feeder Canal
Ranking[5]	1[6]	2	1	2	1[6]	3

Refer to page E-21 for footnotes

COMPARATIVE EVALUATION OF ACCESS ROUTE OPTIONS[1]
PARTIALLY INTEGRATED SITES
SITING OPTIONS PI27E/LF1E

FACTORS	SITE PI27E			PI27E to LF1E
	OPTION 1	OPTION 2	OPTION 3	OPTION 1
Local Access Road(s):				
Population concentrations by number and size	-[3]	-[3]	-[3]	0
Estimated population abutting access road(s)	-	-	-	23
Community features	-	-	-	0
Recreation features	-	-	-	0
Regional Access Road(s):				
Population concentrations by number and size	Welland (45,417)	none	none	none
Estimated population abutting access road(s)	107	3	107	12
Community and recreation features	33 - exhibition mini golf shopping centres (3) cemeteries (2) schools(2) churches (6) college park government buildings (6) temple post office multicultural centre Salvation Army YMCA temple club halls (3) fire station	none	2 - park hall	1 - Canadian-Hungarian Cultural Centre
Ranking[5]	3	1	2	1

Refer to page E-21 for footnotes

FOOTNOTES:

1. For a description of the access route options, refer to the access route key which follows this Appendix.

2. The estimated population abutting the access roads includes portions of the population in the population concentration(s) as noted.

3. Dashes (-) in a column indicates that there is no local access road for the access route option.

4. Sites LF4N, PI1N and PI13N have access route options from the north (Highway 401) and from the south (the QEW). The options from the north for each site were ranked and those from the south were ranked, resulting in two sets of rankings for each of these sites:

	North Options	South Options
LF4N	Options 1-5	Options 6-8
PI1N	Options 1-4	Options 5-7
PI13N	Options 1-3	Options 4-6

5. A ranking of 1 indicates the preferred access route option for the site. The higher the ranking number, the less preferred the access route option.

6. For each of PI18E and LF1C, the access route option preferred from a socio-economic perspective utilizes, in part, the proposed Highway 406 alignment through Welland. This preference differs from that of the site selection team, as noted in M.M. Dillon, Site Selection Process, Phase 3b: Selection of Candidate Sites, Site Selection - Volume 3 - Identification of Candidate Sites, 1984. While the proposed Highway 406 access route was investigated as an option its construction probably would not be completed prior to construction of OWMC proposed facilities. Consequently, another access route option was given preference by the site selection team.

ACCESS ROUTE KEY
(INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION					
	(1)	(2)	(3)	(4)	(5)	(6)
LF4N	from 401 - south on Highway 25; west on Steeles Avenue; south on Bronte Street (First Line Road); west on Britannia Road to site	from 401 - south on Highway 25; west on Steeles Avenue, south on Tremaine Road to site	from 401 - south on James Snow Parkway (becomes Fourth Line at Main Street); south on Fourth Line, west on Britannia Road to site	from 401 - south on James Snow Parkway (becomes Fourth Line at Main Street); south on Fourth Line; east on Derry Road; south on Fifth Line Road; west on Britannia Road to site	from 401 - south on Trafalgar Road, west on Britannia Road to site	from 403 - north on Winston Churchill Blvd.; west on Britannia Road to site
LF10W	from 403 - west on Highway 2/53; south on Trinity Road (Regional Road 22); west on Sawmill Road to site					
LF11W	from 403 - west on Highway 2/53; south on Trinity Road (Regional Road 22) to site					
LF3C	from QEW - south on Victoria Avenue (Regional Road 24); west on Highway 20; south on Regional Road 27; west on Elcho Road to site	from QEW - south on Victoria Avenue (Regional Road 24); west on Canborough Road (Regional Road 63); north on Regional Road 27; west on Elcho Road to site	from QEW - south on Regional Road 18; west on Regional Road 69; south on Regional Road 569; south on Highway 20; south on Regional Road 27 west on Elcho Road to site	from QEW - south on Regional Road 14; south on Regional Road 714; east on Regional Road 73; south on Regional Road 14; east on Highway 20; south on Regional Road 27; west on Elcho Road to site	from QEW - south on Regional Road 14; south on Regional Road 714; east on Regional Road 73; south on Regional Road 14; south on Regional Road 16 to site	from QEW - south on Regional Road 12; east on Highway 20; south on Regional Road 27; west on Elcho Road to site

ACCESS ROUTE KEY
(INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION		
	(7)	(8)	(9)
LF4N (cont'd)	from QEW - north on Trafalgar Road; west on Britannia Road to site	from QEW - north on on Highway 25; west on Britannia Road to site	
LF3C (cont'd)	from QEW - south on Regional Road 12; east on Highway 20; south on Regional Road 14; south on Regional Road 16 to site	from QEW - south on Regional Road 14; east on Regional Road 81; south on Regional Road 514; south on Regional Road 14; south on Regional Road 16 to site	from QEW - south on Regional Road 14; east on Regional Road 81; south on Regional Road 514; south on Regional Road 14; east on Highway 20; south on Regional Road 27 west on Elcho Road to site

ACCESS ROUTE KEY
(INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION					
	(1)	(2)	(3)	(4)	(5)	(6)
LF8C	from QEW - south on Victoria Avenue (Regional Road 24); west on Highway 20; south on Gee Road to site	from QEW - south on Victoria Avenue (Regional Road 24); west on Canborough Road (Regional Road 63); north on Gee Road to site	from QEW - south on Regional Road 18; west on Regional Road 69; south on Regional Road 569; south on Highway 20; south on Gee Road to site	from QEW - south on Regional Road 14; south on Regional Road 714; east on Regional Road 73; south on Regional Road 14; east on Highway 20; south on Gee Road to site	from QEW - south on Regional Road 12; east on Highway 20; south on Gee Road to site	from QEW - south on Regional Road 14; east on Regional Road 81; south on Regional 514; south on Regional Road 14; east on Highway 20; south on Gee Road to site
LF9C	from QEW - south on Victoria Avenue (Regional Road 24); west on Highway 20 to site	from QEW - south on Regional Road 18; west on Regional Road 69; south on Regional Road 569; south on Highway 20 to site	from QEW - south on Regional 14; south on Regional Road 714; east on Regional Road 73; south on Regional Road 14; east on Highway 20 to site	from QEW - south on Regional Road 12; east on Highway 20 to site	from QEW - south on Regional Road 14; east on Regional Road 81; south on Regional Road 514; south on Regional Road 14; east on Highway 20 to site	
LF1E	from 406 (existing) - south on Highway 58 (Regional Road 50); east on Division Street; north on Burgar Street; east on Regional Road 27; (East Main Street) to site	from QEW - west on Biggar Road (Regional Road 47); south on Montrose Road (Regional Road 98); west on Carl Road to site	from 406 (proposed) - east on Regional Road 27 (East Main Street) to site			

ACCESS ROUTE KEY
(INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION					
	(1)	(2)	(3)	(4)	(5)	(6)
LF3E	from 406 (existing) - south on Highway 58 (Regional Road 50); east on Division Street; north on Burgar Street; east on Regional Road 27 (East Main Street); north on Regional Road 84 (Moyer Road); east on Biggar Road (Regional Road 47) to site	from QEW - west on Biggar Road (Regional Road 47) to site	from 406 (proposed) - east on Regional Road 27 (East Main Street); north on Regional Road 84 (Moyer Road); east on Biggar Road (Regional Road 47) to site			

ACCESS ROUTE KEY
(PARTIALLY INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION					
	(1)	(2)	(3)	(4)	(5)	(6)
SITING OPTION PI1A1/LF2N						
PI1AI	from 401 - north on Highway 10 (Hurontario Street); east on Derry Road; north on Airport Road to site	from 401 - north on Highway 10 (Hurontario Street); east on Derry Road; north on Dixie Road; east on Steeles Avenue; north on Airport Road to site	from 410 - east on Derry Road; north on Airport Road to site	from 410 - east on Derry Road; north on Dixie Road; east on Steeles Avenue; north on Airport Road to site		
PI1A1 to LF2N	from PI1A1 - south on Airport Road; west on Derry Road to LF2N	from PI1A1 - south on Airport Road; west on Steeles Avenue; south on Dixie Road; west on Derry Road to LF2N				
LF2N	from 401 - north on Highway 10 (Hurontario Street) to site	from 410 - west on Derry Road to site				
SITING OPTION PI1N/LF2N						
PI1N	from 401 - south on Highway 25; west on Steeles Avenue; south on Bronte Street (becomes First Line at Derry Road); south on First Line to site	from 401 - south on Highway 25; west on Steeles Avenue; south on Tremaine Road; east on Britannia Road (Regional Road 6) to site	from 401 - south on James Snow Parkway (becomes Fourth Line at Main Street); south on Fourth Line west on Britannia Road (Regional Road 6) to site	from 401 - south on Trafalgar Road; west on Britannia Road (Regional Road 6) to site	from 403 - north on Winston Churchill Boulevard; west on Britannia Road (Regional Road 6) to site	from QEW - north on Trafalgar Road; west on Britannia Road (Regional Road 6) to site

ACCESS ROUTE KEY
(PARTIALLY INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION
	(7)
SITING OPTION PI1N/LF2N (cont'd)	
PI1N	from QEW - north on Highway 25 to site

ACCESS ROUTE KEY
(PARTIALLY INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION (1)	(2)	(3)	(4)	(5)	(6)
SITING OPTION PI1N/LF2N (cont'd)						
PI1N to LF2N	from PI1N - east on Britannia Road (Regional Road 6); north on Trafalgar Road to 401; from 401, north on Highway 10 (Hurontario Street) to LF2N	from PI1N - east on Britannia Road (Regional Road 6); north on Fourth Line (becomes James Snow Parkway at Main Street); north on James Snow Parkway to 401; from 401, north on Highway 10 (Hurontario Street) to LF2N	from PI1N - north on First Line (becomes Bronte Street at Derry Road); north on Bronte Street; east on Steeles Avenue; north on Highway 25 to 401; from 401, north on Highway 10 (Hurontario Street) to LF2N	from PI1N - west on Britannia Road (Regional Road 6); north on Tremaine Road; east on Steeles Avenue; north on Highway 25 to 401; from 401, north on Highway 10 (Hurontario Street) to LF2N		
LF2N	• See Siting Option PI1A1/LF2N					
SITING OPTION PI1N/LF4N						
PI1N	• See Siting Option PI1N/LF2N					
PI1N to LF4N	from PI1N - west on Britannia Road (Regional Road 6) to LF4N					
LF4N	• See Access Route Key, Integrated Sites					

ACCESS ROUTE KEY
(PARTIALLY INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION					
	(1)	(2)	(3)	(4)	(5)	(6)
SITING OPTION PI13N/LF2N						
PI13N	from 401 - south on James Snow Parkway (becomes Fourth Line at Main Street); south on Fourth Line; east on Britannia Road (Regional Road 6); south on Fifth Line to site	from 401 - south on James Snow Parkway (becomes Fourth Line at Main Street); south on Fourth Line; east on Derry Road; south on Fifth Line to site	from 401 - south on Trafalgar Road; west on Britannia Road (Regional Road 6); south on Fifth Line to site	from 403 - north on Winston Churchill Blvd; west on Britannia Road (Regional Road 6); south on Fifth Line to site	from QEW - north on Trafalgar Road; west on Britannia Road (Regional Road 6); south on Fifth Line to site	from QEW - north on Highway 25; east on Britannia Road (Regional Road 6); south on Fifth Line to site
PI13N to LF2N	from PI13N - north on Fifth Line; east on Britannia Road (Regional Road 6); north on Trafalgar Road to 401; from 401, north on Highway 10 (Hurontario Street) to LF2N	from PI13N - north on Fifth Line; west on Britannia Road (Regional Road 6); north on Fourth Line (becomes James Snow Parkway at Main St Street), north on Highway 10 (Hurontario Street) to LF2N	from PI13N - north on Fifth Line; west on Derry Road; north on Fourth Line (becomes James Snow Parkway at Main Street); north on James Snow Parkway to 401; from 401 north on Highway 10 (Hurontario Street) to LF2N			
LF2N	• See Siting Option PI1N/LF2N					
SITING OPTION PI13N/LF4N						
PI13N to LF4N	from PI13N - north on Fifth Line; west on Britannia Road (Regional Road 6) to LF4N					
LF4N	• See Access Route Key, Integrated Sites					

ACCESS ROUTE KEY
(PARTIALLY INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION					
	(1)	(2)	(3)	(4)	(5)	(6)
SITING OPTION PI2W/LF10W						
PI2W	from 403 - west on Highway 2; south on Shaver Road to site					
PI2W to LF10W	from PI2W - north on Shaver Road; west on Highway 2/53; south on Trinity Road (Regional Road 22); west on Sawmill Road to LF10W					
LF10W	• See Access Route Key, Integrated Sites					
SITING OPTION PI2W/LF11W						
PI2W to LF11W	from PI2W - north on Shaver Road; west on Highway 2/53; south on Trinity Road (Regional Road 22) to LF11W					
LF11W	• See Access Route Key, Integrated Sites					

ACCESS ROUTE KEY
(PARTIALLY INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION					
	(1)	(2)	(3)	(4)	(5)	(6)
SITING OPTION PI18E/LF1C						
PI18E	from 406 (proposed - east on Regional Road 27 (East Main Street) south on Highway 140 to site	from 406 (existing) - south on Highway 58 (Regional Road 50); east on Division Street; north of Burgar Street east on Regional Road 27 (East Main Street); south on Highway 140 to site				
PI18E to LF1C	from PI18E - south on Highway 140; west on Netherby Road; south on Rusholme Road; west on Townline Road; south on Highway 58; west on Forkes Road (Regional Road 23); north on O'Reilly's Road to LF1C					
LF1C	from QEW - south on Victoria Avenue (Regional Road 24); east on Forkes Road (Regional Road 23); north on O'Reilly's Road to site	from 406 (proposed) - east on Regional Road 27 (East Main Street); south on Highway 140; west on Netherby Road; south on Rusholme Road; west on Townline Road south on Highway 58; west on Forkes Road (Regional Road 23); north on O'Reilly's Road to site	from 406 (existing) - south on Highway 58 (Regional Road 50); east on Division Street, north on Burgar Street; east on Regional Road 27 (East Main Street); south on Highway 140; west on Netherby Road; south on Rusholme Road; west on Townline Road; south on Highway 58; west on Forkes Road (Regional Road 23); north on O'Reilly's Road to site			

ACCESS ROUTE KEY
(PARTIALLY INTEGRATED SITES)

SITE	ACCESS ROUTE OPTION					
	(1)	(2)	(3)	(4)	(5)	(6)
SITING OPTION PI27E/LF1E						
PI27E	from 406 (existing) south on Highway 58 (Regional Road 58); east on Division Street; north on Burgar Street; east on Regional Road 27 (East Main Street); north on Regional Road 84 (Moyer Road); east on Biggar Road to site	from QEW - west on Biggar Road (Regional Road 47) to site	from 406 (proposed) - east on Regional Road 27 (East Main Street); north on Regional Road 84 (Moyer Road); east on Biggar Road to site			
SITING OPTION PI27E/LF1E (cont'd)						
PI27E to LF1E	from PI27E - east on Biggar Road (Regional Road 47); south on Montrose Road (Regional Road 98); west on Carl Road to LF1E					
LF1E	• See Access Route Key, Integrated Sites					

APPENDIX F

Index to Community, Recreation and Tourist Facilities

INDEX OF COMMUNITY, RECREATION AND TOURIST FEATURES

NORTH MAPS: Maps I-1 and I-5

Regional Features

1. William Grenville Davis Senior Elementary School
   - in the City of Brampton

2. J.A. Turner Secondary School
   - in the City of Brampton

3. W.J. Fenton Secondary School
   - in the City of Brampton

4. Ray Underhill Junior Elementary School
   - in Streetsville, City of Mississauga

5. Dolphin Senior Elementary School
   - in Streetsville, City of Mississauga

6. Streetsville Secondary School
   - in Streetsville, City of Mississauga

7. Russell Langmaid Junior Elementary School
   - in Streetsville, City of Mississauga

8. St. Joseph Separate Junior Elementary School
   - in Streetsville, City of Mississauga

9. Meadowvale Elementary School
   - in the City of Mississauga

10. Percy W. Merry Elementary School
    - in the Town of Milton

11. E.W. Foster Elementary School
    - in the Town of Milton

12. E.C. Drury High School and Vocational High School
    - in the Town of Milton
    - on same property as Ernest Drury School for the Hearing Handicapped and Trillium School

13. Sam Sherratt Elementary School
    - in the Town of Milton

14. Milton District High School
    - in the Town of Milton

15. Mississauga Private School
    - in the City of Mississauga

16. Sheridan College, Brampton Campus
    - in the City of Brampton

17. Proposed School
    - in the City of Brampton

18. Proposed School
    - in the City of Brampton

19. Proposed School
    - in the City of Mississauga

20. Proposed School
    - in the City of Mississauga

21. Proposed School
    - in the City of Mississauga

22. Proposed School
    - in the Town of Milton

23. The Ernest Drury School for the Hearing Handicapped
    - in the Town of Milton
    - on same property as E.C. Drury High School and Trillium School

24. Trillium School
    - in the Town of Milton
    - Demonstration School (Learning Disabilities)
    - on same property as E.C. Drury High School and Ernest Drury School for the Hearing Handicapped

25. Milton Mall
    - in the Town of Milton

26. Shoppers World, Brampton Shopping Plaza
    - in the City of Brampton

27. Milton District Hospital
    - in the Town of Milton

28. Halton Centennial Manor, Senior Citizens Home
    - in the Town of Milton

29. Holland Christian Homes, Brampton
    - in the City of Brampton

30. Peel Court House
    - in the City of Brampton

31. Peel Regional Police Headquarters
- in the City of Brampton

32. Meadowvale Village Community Centre
- in the City of Mississauga

33. Streetsville Kinsmen Senior Centre
- in Streetsville, City of Mississauga

34. Boyne Community Centre and Park
- in the Town of Milton

35. Milton Sports Centre
- in the Town of Milton

36. Proposed Dome Stadium
- in the City of Mississauga

37. Streetsville Lawn Bowling Centre
- in Streetsville, City of Mississauga

38. Slovak Benefit Society
- in Streetsville, City of Mississauga

39. Italian Club
- in the Town of Milton

40. Polish Canadian Club
- in the Town of Milton

41. Crawford Lake Conservation Area and Crawford Tract
- in the Town of Milton

42. Rattlesnake Point Conservation Area
- in the Town of Milton

43. Sixteen Valley Conservation Area
- in the Town of Milton

44. Meadowvale Conservation Area
- in the City of Mississauga

45. Zimmerman Park
- in the City of Burlington

46. Drumquin Park
- in the Town of Milton

47. Proposed Park and Recreation Centre
- in the City of Brampton

48. Steeles Park
    - in the City of Brampton

49. Riverview Park
    - in the City of Brampton

50. Meadow Green Park
    - in the City of Mississauga

51. Credit Meadows Park
    - in the City of Mississauga

52. Pinecliffe Park
    - in Streetsville, City of Mississauga

53. Riverrun Park
    - in the City of Mississauga

54. Riverview Park
    - in Streetsville, City of Mississauga

55. Timothy Street Park
    - in Streetsville, City of Mississauga

56. Streetsville Memorial Park and Pool
    - in Streetsville, City of Mississauga

57. Municipal Park
    - in the City of Brampton

58. Sixteen Mile Creek Trail System Development
    - in the Town of Oakville

59. Brampton Golf and Country Club
    - in the City of Brampton

60. Peel Village Golf and Country Club
    - in the City of Brampton

61. Streetsville Glen Golf Club
    - in the City of Brampton

62. Hawthorne Valley Golf and Country Club
    - in the City of Mississauga

63. Derrydale Golf Course
    - in the City of Mississauga

64. Wyldewood Golf and Country Club
- in the Town of Milton

65. Trafalgar Golf and Country Club
- in the Town of Milton

66. Indian Wells Golf and Tennis
- in the City of Burlington

67. Camp Totaredaca (Day Camp)
- in the City of Mississauga
- in Meadowvale Conservation Area

68. Mount Nemo Scout Camp
- in the City of Burlington

69. Sidrabene Children's Church Camp
- in the City of Burlington

70. Pine Ridge Camp
- in the Town of Milton

71. Bruce Trail
- in the Town of Milton

Local Features

72. Derry West Cemetery
- in the City of Mississauga

73. Assumption Cemetery
- in the City of Mississauga

74. Cheyne Cemetery
- in the City of Brampton

75. St. David's Presbyterian Cemetery
- in the Town of Milton

76. Omagh Presbyterian Church
- in the Town of Milton

77. Church
- in the Town of Milton

77a. Church
- in the City of Brampton

78. Omagh Community Park
- in the Town of Milton

79. Municipal Park
- in the Town of Milton

80. Municipal Park
- in the Town of Milton

81. Municipal Park
- in the Town of Milton

82. Proposed Park
- in the City of Brampton

83. Proposed Parkette
- in the City of Brampton

84. Proposed Parkland Development
- in the City of Brampton

85. Peel Public Works Yard
- in the City of Mississauga

86. M.T.C. Yards
- in the City of Mississauga

Insert to Map I-1 and I-5

Regional Features

1. Mayfield Secondary School
   - in the Town of Caledon

2. Mayfield Recreation Complex
   - in the Town of Caledon

3. Claireville Conservation Area
   - in the City of Brampton

4. Castlemore Golf and Country Club
   - in the City of Brampton

5. Woodlands Golf and Country Club
   - in the City of Brampton

Local Features

6. Bramalea Christian Fellowship Church
   - in the City of Brampton
   - under construction

7. Firehall
   - in the City of Brampton

WEST MAPS: Maps I-2 and I-6

Regional Facilities

1. Parkwood Elementary School
   - in the Township of Glanbrook

2. Bellmoore Elementary School
   - in the Township of Glanbrook

3. Mount Hope Elementary School
   - in the Township of Glanbrook

4. Pioneer Memorial School
   - in the Township of Glanbrook

5. Seneca Unity Elementary School
   - in the Town of Haldimand

6. Oneida Central Elementary School
   - in the Town of Haldimand

7. Seneca Central Elementary School
   - in the Town of Haldimand

8. Caledonia Centennial Elementary School
   - in Caledonia, Town of Haldimand

9. Caledonia High School
   - in Caledonia, Town of Haldimand

10. Proposed Secondary School
    - in Caledonia, Town of Haldimand

11. Proposed Secondary School
    - in Caledonia, Town of Haldimand

12. Bishop McCarthy School Property
    - in the Town of Haldimand
    - vacant; property to be sold

13. St. Patrick's Elementary Separate School
    - in Caledonia, Town of Haldimand

14. Haldimand-Norfolk Separate School Board Site
    - in the Town of Haldimand

15. Wentworth County Board of Education Property
    - in the Town of Ancaster

16. Hamilton-Wentworth Roman Catholic Separate School Board Property
    - in The Township of Glanbrook

17. 7th Day Adventist Church School
    - in the Township of Glanbrook
    - closed, present use to be clarified

18. Maple Lane School for the Trainable Retarded
    - in the Town of Ancaster

19. Residence for Handicapped
    - in the Township of Glanbrook

20. Woodburn Community Centre and Park
    - in the Township of Glanbrook

21. Binbrook Community Centre and Park
    - in the Township of Glanbrook
    - on Binbrook Fairgrounds

22. Mount Hope Community Centre and Park
    - in the Township of Glanbrook

23. Springvale Community Centre
    - in the City of Nanticoke

24. Glanbrook Arena Sports Complex and Hall
    - in the Township of Glanbrook

25. Binbrook Fairgrounds
    - in the Township of Glanbrook

26. Caledonia Arena
    - in Caledonia, Town of Haldimand
    - on Haldimand Caledonia Fairground Property

27. Haldimand Caledonia Fair
    - in Caledonia, Town of Haldimand

28. Canadian Warplane Heritage Inc.
    - in the Township of Glanbrook

29. Hamilton Hunt Club
    - in the Township of Onondaga

30. Caledonia Hunters and Anglers Association
    - in the Township of Tuscarora

31. Binbrook Conservation Area
    - in the Township of Glanbrook

32. Caledonia Conservation Area and Flood Plain Lands
    - in Caledonia, Town of Haldimand

33. La Fortune Conservation Area
    - in the Town of Haldimand

34. Oneida Demonstration Area
    - in the Town of Haldimand

35. Hedley Forest Conservation Area
    - in the Town of Haldimand

36. Kinsmen Park
    - in Caledonia, Town of Haldimand

37. Black Creek Park
    - in Caledonia, Town of Haldimand

38. Edinburgh Square
    - in Caledonia, Town of Haldimand

39. Seneca Park
    - in Caledonia, Town of Haldimand

40. McKinnon Park
    - in Caledonia, Town of Haldimand

41. Springvale Softball Park
    - in the City of Nanticoke

42. Binbrook Golf and Country Club
    - in the Township of Glanbrook

43. Sundrim Golf Course
    - in the Town of Haldimand

44. Mount Hope Golf and Country Club
    - in the Township of Glanbrook

45. Southern Pines Golf and Country Club
    - in the Township of Glanbrook

46. Southbrook Golf and Country Club
    - in the Township of Glanbrook

47. Knollwood Golf Club
    - in the Town of Ancaster

48. The Big Creek Boat Farm
    - in the Township of Onondaga

Local Features

49. Cemetery
    - in the Town of Ancaster

50. Shaver Family Cemetery
    - in the Town of Ancaster

51. Carluke East Cemetery
    - in the Town of Ancaster

52. Carluke West Cemetery
    - in the Town of Ancaster

53. St. Paul's Presbyterian Cemetery
    - in the Town of Ancaster

54. Cemetery
    - in the Town of Ancaster

55. Salem Cemetery
    - in the Township of Glanbrook

56. Binbrook Baptist Cemetery
    - in the Township of Glanbrook

57. Binbrook United Church Cemetery
    - in the Township of Glanbrook

58. Knox Presbyterian Cemetery
    - in the Township of Glanbrook

59. St. Joseph's Roman Catholic Cemetery
    - in the Township of Glanbrook

60. Christ Church Anglican Cemetery
    - in the Township of Glanbrook

61. Old Kirk Cemetery
    - in the Township of Glanbrook

62. Second Onondaga Baptist Church Cemetery
    - in the Township of Onondaga

63. Cemetery
    - in the Township of Onondaga

64. Binbrook Fire Hall
    - in the Township of Glanbrook

65. Caledonia Police Station
    - in Caledonia, Town of Haldimand

66. Tot Lot
    - in Caledonia, Town of Haldimand

67. Fame Furlane Park
    - in the Township of Glanbrook

68. Serbian Orthodox Church Park
    - in the Township of Glanbrook

69. Carluke Park and Community Hall
    - in the Town of Ancaster

70. Ancaster Double Rinks (Arena)
    - in the Town of Ancaster

CENTRAL MAPS: Maps I-3 and I-7

Regional Features

1. William E. Brown Elementary School
   - in the Township of Wainfleet

2. St. Elizabeth Separate Elementary School
   - in the Township of Wainfleet

3. College Street Elementary School
   - in Smithville, Township of West Lincoln

4. St. Martin Separate Elementary School
   - in Smithville, Township of West Lincoln

5. South Lincoln Secondary School
   - in Smithville, Township of West Lincoln

6. John Calvin School of Smithville
   - in Smithville, Township of West Lincoln

7. Gainsboro Central Elementary School
   - in the Township of West Lincoln

8. Caistor Central Elementary School
   - in the Township of West Lincoln

9. District Christian High School
   - in Smithville, Township of West Lincoln

10. Calvanistic Christian School
    - in the Township of Wainfleet

11. Robert Land Academy
    - in the Township of West Lincoln

12a. Wainfleet Community Centre
     - in the Township of Wainfleet

12b. Wainfleet Sports Complex
     - in the Township of Wainfleet

13. Ellsworth Community Centre
    - in the Township of Wainfleet

14. Schwoob Community Centre
    - in the Township of Wainfleet

15. Wellandport Community Centre and Park
    - in Wellandport, Township of West Lincoln

16. Silverdale Community Centre
    - in the Township of West Lincoln

17. Caistor Community Centre
    - in the Township of West Lincoln

18. Smithville Community Park and Arena
    - in Smithville, Township of West Lincoln

19. Chippawa Conservation Area
    - in the Township of Wainfleet

20. Smithville Conservation Area
    - in the Township of West Lincoln

21. Gainsborough Conservation Area
    - in the Township of West Lincoln

22. Oswego Creek Conservation Area
    - in the Town of Dunnville

23. Canboro Conservation Area
    - in the Town of Dunnville

24. Nature and Wildlife Sanctuary
    - in the Township of Wainfleet

25. Camp Keewaytin
    - in the Township of West Lincoln

26. Welland Feeder Canal
    - in the Township of Wainfleet

27. Westbrook Golf and Country Club
    - in the Township of Wainfleet

28. Twenty Valley Golf Course
    - in the Town of Lincoln

Local Features

29. St. Elizabeth Roman Catholic Church
    - in the Township of Wainfleet

30. Caistor Centre Free Methodist Church
    - in the Township of West Lincoln

31. Church
    - in the Township of West Lincoln

32. Church
    - in the Township of West Lincoln

33. Church
    - in the Township of West Lincoln

34. Church
    - in the Township of West Lincoln

35. Church
    - in the Township of West Lincoln

36. Church of Christ
    - in the Township of Wainfleet

37. Baptist Church
    - in the Township of Wainfleet

38. Anglican Church
    - in the Township of Wainfleet

39. Farr's Cemetery
    - in the Township of Wainfleet

40. Winslow Cemetery
    - in the Township of West Lincoln

41. McCaffrey Cemetery
    - in the Township of West Lincoln

42. Evangelical United Brethren Cemetery
    - in the Township of West Lincoln

43. Elcho Cemetery
    - in the Township of West Lincoln

44. Sensabaugh Cemetery
    - in the Township of Wainfleet

45. Willson Cemetery
    - in the Township of Wainfleet

46. O'Reilly's Cemetery
    - in the Township of Wainfleet

47. Township of Wainfleet Municipal Offices
    - in the Township of Wainfleet
    - in the Village community centre complex

48. Wainfleet Township Public Library
    - in the Township of Wainfleet
    - in the Village community centre complex

49. Wainfleet Fire Station
    - in the Township of Wainfleet
    - in the Village community centre complex

EAST MAPS: Maps I-4 and I-8

Regional Features

1. River View Elementary School
   - in the City of Niagara Falls

2. King George V Elementary School
   - in the City of Niagara Falls

3. F.J. Rutland Senior Elementary School
   - in the City of Niagara Falls

3a. James Morden Elementary School
   - in the City of Niagara Falls

4. Stevensville Elementary School
   - in the Town of Fort Erie

5. Princess Elizabeth Elementary School
   - in the City of Welland

6. Ecole General Vanier
   - in the City of Welland

7. Mathew's Elementary School
   - in the City of Welland

8. Ecole Champlain
   - in the City of Welland

9. Bridge View Elementary School
   - in the City of Welland

10. Welland South Elementary School
   - in the City of Welland

11. Fitch Street Elementary School
   - in the City of Welland

12. Westbrook Secondary School (Vocational)
   - in the City of Welland

13. Welland High and Vocational School
   - in the City of Welland

14. Eastdale Secondary School
   - in the City of Welland

15. Ecole Secondaire Confederation
    - in the City of Welland

16. Sacred Heart Elementary Separate School
    - in the City of Niagara Falls

17. St. Joseph Elementary Separate School
    - in the Town of Fort Erie

18. St. Andrew Elementary Separate School
    - in the City of Welland

19. Holy Name Elementary Separate School
    - in the City of Welland

20. St. Augustine Elementary Separate School
    - in the City of Welland

21. St. Joseph's Elementary Separate School
    - in the City of Welland

22. St. Mary Elementary Separate School
    - in the City of Welland

23. Sts. Peter and Paul Elementary Separate School
    - in the City of Welland

24. Niagara Christian College
    - in the Town of Fort Erie

25. Pauline McGibbon School for the Trainable Retarded
    - in the City of Welland

26. Westwood Residence for Retarded Persons
    - in the Town of Pelham

27. Welland County Roman Catholic School Board
    Administration Offices
    - in the City of Welland

28. Niagara South Board of Education, Welland Operations
    - in the City of Welland

29. Niagara Square Mall
    - in the City of Niagara Falls

30. Welland General Hospital
    - in the City of Welland

31. Stevensville Community Centre and Park
    - in the Town of Fort Erie

32. Willoughby Community Centre and Archery Club
    - in the City of Niagara Falls

33. Canadian-Hungarian Cultural Centre
    - in the City of Niagara Falls

34. Niagara Parks Marina
    - in the Town of Fort Erie

35. Parkway Sailing Club
    - in the Town of Fort Erie

36. Willoughby Marsh (Conservation Area)
    - in the City of Niagara Falls

37. E.C. Brown Conservation Area
    - in the Town of Pelham

38. United Empire Loyalists Conservation Area
    - in the Town of Fort Erie

39. Stevensville Conservation Area
    - in the Town of Fort Erie

40. Stamford Park
    - in the City of Niagara Falls

41. Baden Powell Park
    - in the City of Niagara Falls

42. Chippawa Lions Club Park
    - in the City of Niagara Falls

43. Grassybrook Park
    - in the City of Niagara Falls

44. St. George Park
    - in the City of Welland

45. Maple Park
    - in the City of Welland

46. Memorial Park
    - in the City of Welland

47. Linear Park
    - in the City of Niagara Falls
    - under development

48. Dufferin Islands
    - in the City of Niagara Falls

49. Queen Victoria Park
    - in the City of Niagara Falls

50. Kingsbridge Park
    - in the City of Niagara Falls

51. Mud Lake Wildlife Land Agreement Extension Area
    - in the City of Port Colborne

52. International Country Club
    - in the Town of Fort Erie

53. Riverview Downs Golf Course
    - in the Town of Pelham

54. Highland Golf and Country Club
    - in the Town of Pelham

55. Sawmill Golf Course
    - in the Town of Pelham

56. Oakes Estate
    - in the City of Niagara Falls
    - Niagara Parks Commission administrative offices in historic Oakes Hall, and golf course

57. Oaklands Golf and Country Club
    - in the City of Niagara Falls

58. Rolling Meadows Golf and Country Club
    - in the City of Niagara Falls

59. Willo-Dell Golf Club
    - in the City of Niagara Falls

60. Oaklands Tent and Trailer Park
    - in the City of Niagara Falls

61. Indian Lake Tourist Camp
    - in the Town of Pelham

62. Miller's Creek Park
    - in the Town of Fort Erie
    - camp ground

63. Marineland
    - in the City of Niagara Falls

64. Niagara South Recreation Complex
- in the City of Niagara Falls

65. Welland Feeder Canal
- in the City of Welland

66. BMX Track
- in the City of Welland

Local Features

67. St. Augustine Roman Catholic Church
- in the City of Welland

68. Sts. Peter and Paul Roman Catholic Church
- in the City of Welland

69. Church
- in the City of Welland

70. Kingdom Hall of Jehovah's Witnesses
- in the City of Welland

71. Church
- in the City of Welland

72. Our Saviour Lutheran Church
- in the City of Niagara Falls

73. Oakwood Gospel Hall
- in the City of Niagara Falls

74. Falls View Brethren in Christ Church
- in the City of Niagara Falls

75. Doan's Ridge Cemetery
- in the City of Welland

76. Cemetery
- in the City of Niagara Falls

77. Lyons Creek Cemetery
- in the City of Niagara Falls

78. St. Joseph's Roman Catholic Cemetery
- in the Town of Fort Erie

79. Cemetery
- in the Town of Fort Erie

80. Beam (United Brethren) Cemetery
- in the Town of Fort Erie

81. St. John's Anglican Cemetery
- in the Town of Fort Erie

82. Station Park
- in the City of Welland

83. King Street Playground
- in the City of Welland

84. Chaffey Street Park
- in the City of Welland

85. Deere Street Park
- in the City of Welland

86. Seaway Park
- in the City of Welland

87. John Deere Playground
- in the City of Welland

88. Glenwood Park
- in the City of Welland

89. Westbrook Park
- in the City of Welland

90. Broadway Park
- in the City of Welland

91. Harold Bradshaw Memorial Park
- in the Town of Pelham

92. Crowland Community Park
- in the City of Niagara Falls

93. Niagara Falls Kinsmen Park
- in the City of Niagara Falls

94. Prince Charles Park
- in the City of Niagara Falls

95. Franklin J. Miller Park
- in the City of Niagara Falls

96. Wilson Crescent Park
- in the City of Niagara Falls

97. Willoughby Centennial Park
- in the City of Niagara Falls

98. Stevensville Mini-Park
- in Fort Erie
- in United Empire Loyalist Conservation Area

98a. A.C. Douglas Park
- in the Town of Fort Erie

99. City Beautification Area
- in the City of Welland

100. Niagara Meadows Holiday Travel Campground
- in the City of Niagara Falls

101. Jack and Jill Nursery School
- in the Town of Pelham

102. Niagara South Rowing Club
- in the City of Welland

103. Ontario Provincial Police Station
- in the City of Welland

104. City of Welland Works Department
- in the City of Welland

105. City of Welland Parks Department
- in the City of Welland

POOR

QUALITY

ORIGINAL